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ABSTRACT

This is the fourth edition of an annual report on trends in the well-being of America's children and youth. Part 1 of the report describes national trends for over 90 indicators of child and youth well-being based on data collected by the federal government. The information provided for each indicator includes one or more tables documenting recent historical trends and important population subgroup differences, graphics to highlight key trends and group contrasts, and accompanying text that describes the importance of each indicator and highlights the most salient features of the data. The indicators are grouped into five substantive areas: (1) population, family, and neighborhood; (2) economic security; (3) health conditions and health care; (4) social development, behavioral health, and teen fertility; and (5) education and achievement. Part 2 of the report examines changes in risk-taking among high school students from 1991-1997, while part 3 documents the co-occurrence of teen health risk behaviors. (HTH)

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Trends in the Well-Being of America's Children & Youth

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Trends in the Well-Being of America's Children & Youth

1999

Part One of this document was produced by Child Trends, Inc.
(Brett Brown, Project Director; Sharon Vandivere, Project Manager)
and Parts Two and Three were produced by Laura Duberstein Lindberg,
Scott Boggess, Laura Porter, and Sean Williams of the Urban Institute.

U.S. Department of Health and Human Services
Office of the Assistant Secretary for Planning and Evaluation

Trends in the Well-Being of America's Children and Youth

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Introduction

PART 1

This is the fourth edition of an annual report from the Department of Health and Human Services (HHS) on trends in the well-being of our nation's children and youth. The report presents the most recent and reliable estimates on more than 90 indicators of well-being. It is intended to provide the policy community, the media, and all interested citizens with an accessible overview of data describing the condition of children in the United States.

The indicators have been organized into five broad areas:

- Population, family, and neighborhood;
- Economic security;
- Health conditions and health care;
- Social development, behavioral health, and teen fertility; and
- Education and achievement.

For each indicator, the report provides graphics to highlight key trends and important population subgroup differences, and tables that provide more detailed information for the interested user. These are accompanied by text that briefly describes the importance of each indicator and highlights the most salient features of the data.

INDICATORS INCLUDED IN THE REPORT

This report presents a broad and carefully chosen collection of national estimates of child and youth well-being. It reports indicators that have been collected more than once over the last few years so that trends may be presented. Where possible, trends are presented from the 1970s through the 1990s. In a few cases, data for earlier years are also presented, as are projections into the 21st century.

Decisions regarding which indicators to include in the report have been guided by a combination of scientific and practical considerations. In preparation for the first edition of this report, a list of indicators was culled from over 20 papers presented at a major national conference on indicators of child well-being. At this conference, nationally recognized experts representing a broad spectrum of disciplines and research interests related to child well-being recommended key indicators that should be tracked on a regular basis by the federal statistical system.

The final list of indicators was modified based on a number of practical considerations including data availability (the data needed to be available for a nationally representative sample and on a regular basis), timeliness (the estimates had to be available for 1990 or later), and quality and consistency (the data had to be both reliable and consistently measured over time).

Important indicators have been added based on recommendations from the staff of statistical agencies that are participating in the Federal Interagency Forum on Child and Family Statistics, described below. Additional indicators have been added based on the work of researchers from the Family and Child Well-being Research Network, funded by the National Institute of Child Health and Human Development (NICHD), who have developed new indicators from existing data sources.

New indicators for this edition of the report include:

- Arts proficiency for children in grade 8 (EA 2.4)
- Student computer use (EA 3.5)

REPORT HIGHLIGHTS

This report is intended to help readers develop a sense of how children and youth are faring overall. Here is a sample of recent findings:

- Youth violence has been decreasing, with homicide rates down from 20.7 to 12.8 per thousand youth ages 15 to 19 between 1993 and 1997, and declines in reported weapon carrying among 9th – 12th grade students from 26 percent in 1991 to 18 percent in 1997.
- After increases between 1985 and 1991, the birth rate for teen females ages 15 to 19 continues its downward trend from 62.1 births per thousand in 1991 to 52.3 per thousand in 1997.
- Median income for families with children increased between 1996 and 1997, from $41,925 to $43,545.
- The percentage of families with children receiving welfare payments decreased steadily between 1993 and 1997 from 14 percent to 9 percent.
- The percentage of single mothers who were in the labor force increased from 66 percent in 1996 to 74 percent in 1998.

THE NEED FOR BETTER DATA ON CHILDREN

As this report demonstrates, the data available for tracking the well-being of children and youth at the national level are fairly extensive. Even so, there remain major gaps in the federal statistical system that must be filled if we are to have a complete picture of the quality of our children's lives.

We have few measures of social development and health-related behaviors for very young and pre-teenage children that are measured on a regular basis. For example, we currently lack good indicators of school readiness for young children. Measures of mental health for any age child are rare, though one such measure was recently added to the National Health Interview Survey. Positive measures of social development and related behaviors are also sparse, with the result that the current set of indicators may present a gloomier picture of our children's overall well-being than is in fact the case. New indicators that reflect the positive developments we desire for our children and youth clearly need to be developed and incorporated into the federal statistical system.

We have very few indicators available that reflect important social processes affecting child well-being that go on inside the family and within the neighborhood. Measures of parent-child interactions, critical to the social and intellectual development of children, are only now beginning to work their way into regularly repeated national surveys. We currently lack an annual measure of whether both biological parents of a child are in the household. Reliable indicators of child homelessness also need to be developed.

Other important areas in need of measurement development or improvements in the quality, consistency, and frequency of available data include child abuse and neglect, youth violent crime, day care quality, learning disabilities, and measures of children in institutionalized care.

Finally, data that can be used to track the well-being of children at the state and local levels are much less plentiful than at the national level. As state and local governments take on increasing levels of responsibility for the design and implementation of all sorts of government programs affecting children, youth, and their families, the need for such information is increasing. The federal statistical system is positioned to play a significant role in increasing the availability of such data for use at the state and local level.

FEDERAL INTERAGENCY FORUM ON CHILD AND FAMILY STATISTICS

The Federal Interagency Forum on Child and Family Statistics, an interagency group of leaders of federal agencies and departments responsible for collecting data on children and youth, has adopted a mandate to improve the federal statistical system regarding data on children, youth, and their families. Member agencies have played a crucial role in the production of this report, providing data and carefully reviewing relevant text. This forum, created in 1995, will continue to develop strategies for improving the federal statistical system in ways that preserve existing data in these areas while filling in the data gaps described above.

For example, member agencies have recently been working to develop new indicators in several areas where they are currently lacking. A subcommittee on fatherhood has been established and is working with agency researchers and members of the NICHD Family and Child Well-being Research Network to develop new indicators related to fathering and male fertility and incorporating them into federal surveys where appropriate. Several indicators developed through this effort are included in this year's report (See SD 1.8 *closeness with parents*, and SD 1.9 *parent's activities with children*). In addition, the Department of Agriculture has recently developed a measure of food security for children which is also included in this report. As additional measures from these and similar efforts become available, they will be incorporated into future editions of the report.

USING THE DOCUMENT

In the presentation of data for this report, percents and rates were, as a rule, rounded to the nearest whole number. Estimates based on the Decennial Census, the National Vital Statistics System, and surveys with very large sample sizes were often presented to one decimal place since differences of less than one percentage point are often or always statistically significant from these sources.

Practical considerations did not allow for the use of tests of statistical significance for all cross-time and between-group differences discussed in the text, though they were used in many cases. When such tests were not available, small differences were either not reported in the text or were reported cautiously. Often in such cases estimates were simply reported without any claims as to which were in fact higher or lower.

Finally, the user should note that in all tables and figures, unless otherwise clearly specified, race-specific estimates (e.g., white, black, Native American, Asian) include Hispanics of those races even when a separate estimate is given for Hispanics. In cases where Hispanics have been separated, "non-Hispanic" will follow the race designation as in "white, non-Hispanic." By contrast, in the textual descriptions of the data, races are in most cases referred to simply as white, black, Native American, or Asian, whether or not they include Hispanics.

Population, Family, and Neighborhood

(PF)

PF 1.1

NUMBER OF CHILDREN UNDER AGE 18 IN THE UNITED STATES

Though the total population of the United States has grown steadily over the last four decades, growth in the number of children has been less steady, and the number of children has even decreased during some periods.

From 1950 to 1964, roughly the period of the baby boom, the number of children under age 18 increased by 47 percent from 47.3 to 69.7 million (see Figure PF 1.1). The number remained fairly stable for the next seven years. Between 1971 and 1984, the number actually declined by 10 percent from 69.8 to 62.5 million. Since then, the number of children has increased each year, reaching 69.9 million in 1998. The U.S. Bureau of the Census expects that the number of children will continue to rise over the next several decades, projecting a population of 77.6 million children under age 18 by the year 2020.

Table PF 1.1

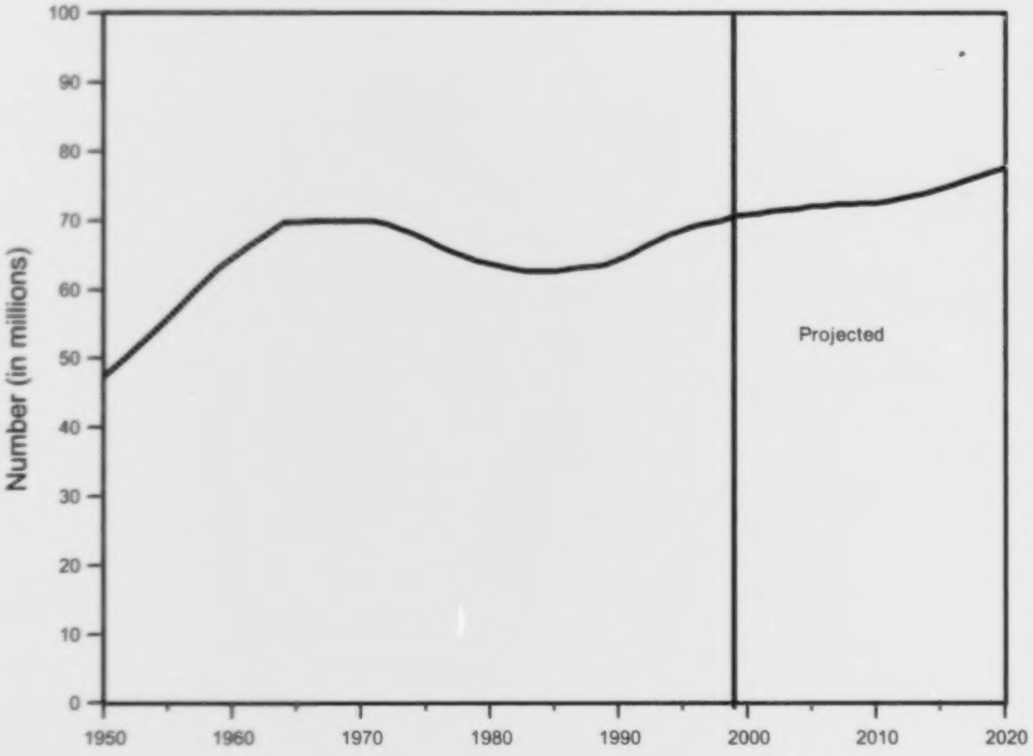
Number (in millions) of children under age 18 in the United States, by age: selected years, 1950-1998, and projected, 2000-2020

									Projected		
	1950	1960	1970	1980	1990	1996	1997	1998	2000	2010	2020
All children	47.3	64.5	69.8	63.7	64.2	69.1	69.6	69.9	70.8	72.5	77.6
Under age 6	19.1	24.3	20.9	19.6	22.5	23.3	23.1	22.9	22.9	23.9	26.4
Ages 6-11	15.3	21.8	24.6	20.8	21.6	23.0	23.4	23.7	24.3	23.6	25.8
Ages 12-17	12.9	18.4	24.3	23.3	20.1	22.7	23.0	23.2	23.6	25.0	25.4

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 311, No. 519, No. 917, No. 1130 (Table 2 in each); and unpublished data, U.S. Bureau of the Census. As published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table POP1.

Figure PF 1.1

Number (in millions) of children under age 18 in the United States: 1950-1998, and projected, 1999-2020



Sources: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 311, No. 519, No. 917, No. 1130 (Table 2 in each); and unpublished data, U.S. Bureau of the Census. As published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table POP1.

PF 1.2
CHILDREN AS A PERCENTAGE OF THE TOTAL POPULATION

The percentage of the total population who are children can have important consequences for the entire population. On the one hand, because children are for the most part dependent and in need of investment to become productive citizens, they may present special short-term fiscal challenges to society when they constitute a relatively high proportion of the overall population. On the other hand, as they grow up and become productive adults they will provide support for those entering retirement and for the next generation of children.

In 1950, children under age 18 constituted 31 percent of the overall population (see Figure PF 1.2). During the next decade, children as a proportion of the population rose rapidly to 36 percent. The rise in birthrates that produced this increase in the proportion of children in the population during the 1950s is commonly known as the baby boom. Since that peak in 1960, the percentage has been declining to its current level of 26 percent. Projections by the U.S. Bureau of the Census predict that this proportion will drop further to 24 percent by the year 2010 and will remain at approximately that level through 2020.

In contrast, the proportion of the population ages 65 and older has increased from 8 percent in 1950 to 13 percent in 1998. That percentage is projected to increase to 16 percent by the year 2020.

Table PF 1.2

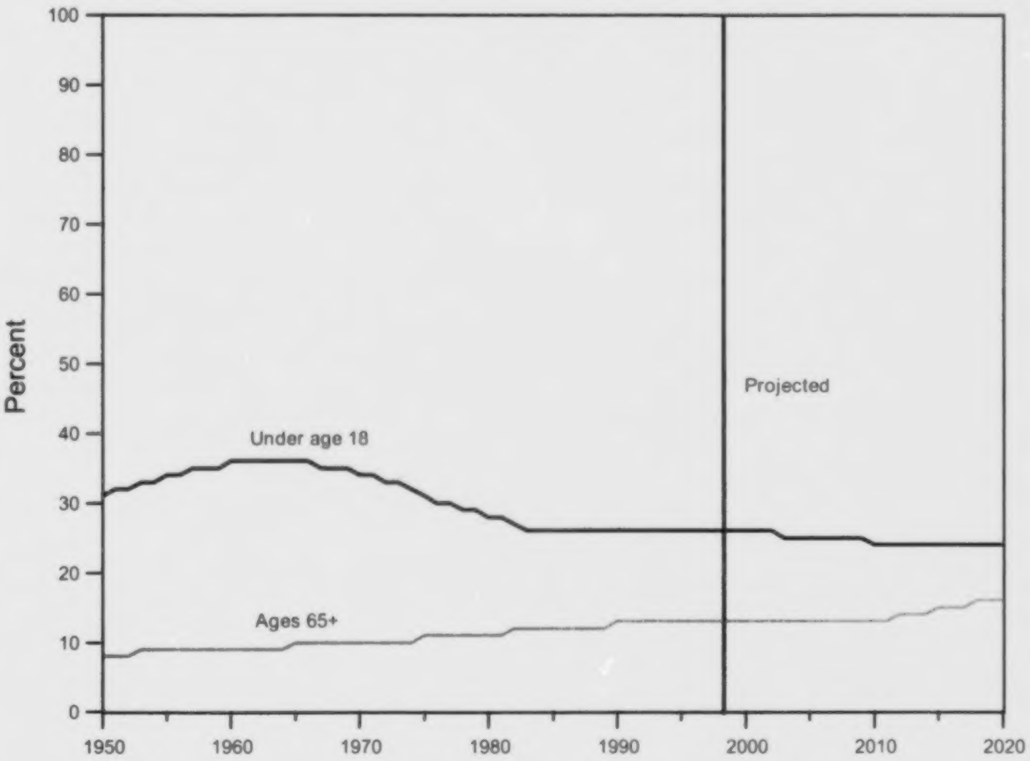
Persons in selected age groups as a percentage of the total U.S. population: selected years, 1950-1998, and projected, 2000-2020

									Projected		
Age group	1950	1960	1970	1980	1990	1996	1997	1998	2000	2010	2020
Under age 18	31	36	34	28	26	26	26	26	26	24	24
Ages 18-64	61	55	56	61	62	61	61	61	62	62	59
Ages 65+	8	9	10	11	13	13	13	13	13	13	16

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 311, No. 519, No. 917, No. 1130 (Table 2 in each); and unpublished data, U.S. Bureau of the Census.

Figure PF 1.2

Children under age 18 and adults ages 65 and over as a percentage of the U.S. population: 1950-1998, and projected, 1999-2020



Sources: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 311, No. 519, No. 917, No. 1130 (Table 2 in each); and unpublished data, U.S. Bureau of the Census, available online at http://www.census.gov/population/www.projections/natproj.html, 3/4/99.

PF 1.3

PERCENTAGE OF FAMILIES WITH CHILDREN AND DISTRIBUTION OF FAMILIES BY NUMBER OF CHILDREN

Since 1960, Americans have been moving toward having families with fewer children. Indeed, a growing percentage of families have no minor children of their own in their household. Between 1960 and 1990, the percentage of families with four or more own children under age 18 in the household decreased from 9 percent to 3 percent, where it has remained through 1998 (see Figure PF 1.3). During the same period, the proportion of families with no minor children grew from 43 percent to 51 percent.

Differences by Race and Hispanic Origin. These general trends are also evident when white, black, and Hispanic families are considered separately, though the levels are substantially different for each group (see Table PF 1.3). For example, between 1970 and 1998 the percentage of black families with four or more children dropped from 19 percent to 4 percent. The percentage for whites during that period went from 9 percent to 2 percent. For Hispanic families, the percentage dropped from 10 percent to 6 percent between 1980 (the first year for which Hispanic estimates are available) and 1998.

Black and Hispanic families were considerably less likely than white families to be without any minor children, with proportions of 42 percent, 36 percent, and 52 percent, respectively, in 1998. They were also more likely than white families to have four or more children, though these differences were smaller than in previous decades.

Table PF 1.3

Percentage distribution of families in the United States by number of own children under age 18 and by race and Hispanic origin:[a] selected years, 1960-1998

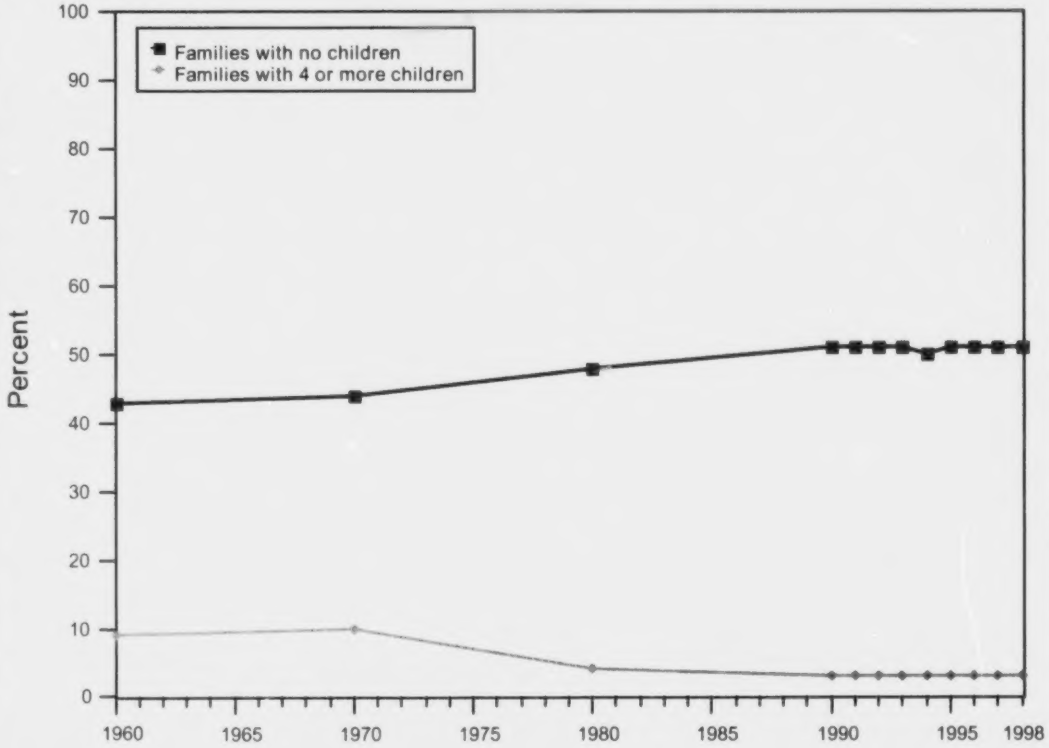
	1960	1970	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998
All families												
Without own children	43	44	48	51	51	51	51	50	51	51	51	51
One child	19	18	21	21	20	20	20	20	20	20	20	20
2 children	18	17	19	19	19	18	19	19	19	19	19	19
3 children	11	11	8	7	7	7	7	8	7	7	7	8
4 or more children	9	10	4	3	3	3	3	3	3	3	3	3
White families												
Without own children	43	45	49	51	53	53	53	52	52	52	52	52
One child	19	18	21	21	19	20	19	19	20	19	20	20
2 children	18	18	19	19	18	18	19	19	19	19	19	18
3 children	11	11	8	7	7	7	7	7	7	7	7	7
4 or more children	9	9	4	3	3	3	2	2	2	3	2	2
Black families												
Without own children	—	39	38	41	41	42	42	40	42	43	42	42
One child	—	18	23	25	25	24	25	25	24	24	24	23
2 children	—	15	20	19	19	19	18	20	20	18	20	21
3 children	—	10	10	9	9	10	10	9	9	9	9	9
4 or more children	—	19	8	6	6	5	5	5	5	5	5	4
Hispanic families												
Without own children	—	—	31	37	36	36	37	36	36	36	35	36
One child	—	—	23	23	22	22	23	22	23	23	24	23
2 children	—	—	23	21	23	22	22	23	23	23	23	23
3 children	—	—	13	12	12	13	12	13	12	12	12	12
4 or more children	—	—	10	7	7	7	7	6	7	7	5	6

[a] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Sources: U.S. Bureau of the Census. "Households and Family Characteristics: 1998" Current Population Reports, Series P-20, no. 515. Washington, D.C.: Government Printing Office; also previous issues of this annual report (Series P-20, no. 509, no. 495, no. 488, no. 483, no. 477, no. 467, no. 458, no. 447, and no. 366, Table 1 in each; no. 218, Table 5; and no. 106, Table 7).

Figure PF 1.3

Percentage of families in the United States with no children, and with four or more resident children: selected years, 1960-1998



Sources: U.S. Bureau of the Census. "Households and Family Characteristics: 1998". Current Population Reports, Series P-20, no. 515. Washington, D.C.: Government Printing Office; also previous issues of this annual report (Series P-20, no. 509, no. 495, no. 488, no. 483, no. 477, no. 467, no. 458, no. 447, and no. 366, Table 1 in each; no. 218, Table 5; and no. 106, Table 7).

PF 1.4

RACIAL AND ETHNIC COMPOSITION OF THE CHILD POPULATION OF THE UNITED STATES

The United States has become increasingly racially and ethnically diverse over the last several decades and is projected to become even more so in the decades to come. As recently as 1980, nearly three-quarters (74 percent) of all children in this country were non-Hispanic whites (see Figure PF 1.4). This proportion diminished to 65 percent in 1998 and is expected to continue a steady downward trend so that, by the year 2020, non-Hispanic whites will constitute just over one-half (55 percent) of the U.S. child population.

Prior to 1997, non-Hispanic blacks were the largest minority population of children in the United States. In 1997 and 1998, however, Hispanics and non-Hispanic blacks each constituted about 15 percent of the total child population, with more Hispanic than black children (10.7 versus 10.2 million) in 1998 (see Table PF 1.4). These were followed by non-Hispanic Asian Americans at 4 percent, and non-Hispanic Native Americans at 1 percent. By the year 2020, more than one in five American children are expected to be Hispanic, nearly double the proportion in 1990. The Asian American population is also expected to continue its rapid growth, increasing from 4 percent in 1998 to 6 percent by the year 2010.

Table PF 1.4

Percentage distribution and number (in millions) of children under age 18 in the United States, by race and Hispanic origin:[a] selected years, 1980-1998, and projected, 2000-2020

							Projected	
Race and Hispanic origin	1980	1990	1996	1997	1998	2000	2010	2020
White, non-Hispanic	74	69	66	66	65	64	59	55
Black, non-Hispanic	15	15	15	15	15	15	16	16
Hispanic[a]	9	12	14	15	15	16	19	22
Asian/Pacific Islander[b]	2	3	4	4	4	4	6	6
American Indian/Alaska Native[b]	1	1	1	1	1	1	1	1

							Projected	
Number (in millions)	1980	1990	1996	1997	1998	2000	2010	2020
White, non-Hispanic	47.1	44.2	45.6	45.6	45.5	45.4	42.7	42.4
Black, non-Hispanic	9.3	9.5	10.1	10.2	10.2	10.6	11.3	12.2
Hispanic[a]	5.7	7.9	10.0	10.4	10.7	11.0	13.7	17.2
Asian/Pacific Islander[b]	1.1	2.0	2.6	2.7	2.8	3.1	4.0	5.0
American Indian/Alaska Native[b]	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.8

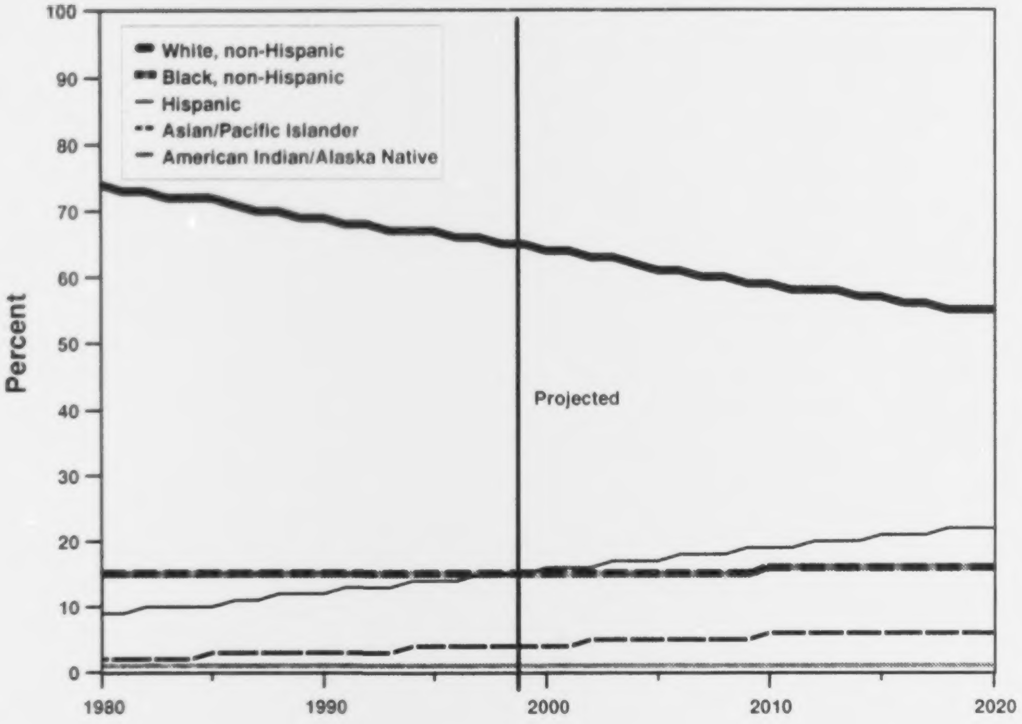
[a] Persons of Hispanic origin may be of any race.

[b] Excludes persons who are of Hispanic origin.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1095, Table 1; and No. 1130, Table 2; also unpublished data, U.S. Bureau of the Census. Percentage estimates as published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table POP3.

Figure PF 1.4

Percentage distribution of children under age 18 in the United States, by race and Hispanic origin:ª 1980-1998, and projected, 1999-2020



ªPersons of Hispanic origin may be of any race. Estimates for whites, blacks, Asian/Pacific Islanders, and American Indian/Alaska Natives exclude persons of Hispanic origin.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1095, Table 1; and No. 1130, Table 2; also unpublished data, U.S. Bureau of the Census. As published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table POP3.

PF 1.5

IMMIGRANT CHILDREN

The United States is a nation of immigrants. Rates of immigration have varied substantially over periods of our history, as have the countries and cultures from which these immigrants originate. Recently, the United States has been experiencing a period of high immigration. Immigrant children are of particular interest, since they may have special needs that must be addressed through the education system.

The percentage of America's children and youth under age 20 who are foreign born has been increasing steadily over the last several decades, from 1.2 percent in 1970 to 3.7 percent in 1990 (see Figure PF 1.5.A).

Differences by Age. Older children are more likely than younger children to be foreign born. In 1990, 6.5 percent of youth ages 15 through 19 were foreign born, compared with only 1.4 percent of children under age 5 (see Table PF 1.5.A).

Differences by Race and Hispanic Origin. The percentage of children and youth under age 20 who are foreign born varies substantially by racial and ethnic background (see Figure PF 1.5.B). In 1980, less than 2 percent of whites, blacks, and Native Americans were foreign born, compared with 40 percent of Asians and 14 percent of Hispanics. By 1990, the percentage of foreign-born Asian children had declined from 40 to 33.2 percent, while the percentage of foreign-born Hispanic children increased to almost 16 percent. More recent data for children under age 18 show a similar pattern, though differences in both data source and age range prevent direct comparison with earlier data (see Table 1.5.B).

Table PF 1.5.A

Percentage of children under age 20 in the United States who were foreign born,[a] by age, and by race and Hispanic origin:[b] 1970, 1980, and 1990

	1970	1980	1990
All children	1.2	2.9	3.7
Under age 5	0.6	1.4	1.4
Ages 5-9	1.1	2.6	2.7
Ages 10-14	1.4	3.2	4.3
Ages 15-19	1.8	4.1	6.5
Race and Hispanic origin			
White	1.2	1.7	1.8
Black	0.5	1.8	2.2
American Indian/Alaska Native	—	1.5	1.1
Asian/Pacific Islander	—	40.0	33.2
Hispanic	—	14.0	15.8

[a] Includes both immigrants and illegal aliens.

[b] Persons of Hispanic origin may be of any race. Estimates for whites, blacks, Asians, and Native Americans include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, National Origin and Language, PC(2-1A), 1970; U.S. Bureau of the Census, Detailed Characteristics of the Population, 1980, Chapter D, U.S. Summary; U.S. Bureau of the Census, The Foreign-Born Population in the U.S., 1990, CP-3-1, and 1990 STF-3A census files.

Table PF 1.5.B

Percentage of children under age 18 in the United States who were foreign born,[a] by race and Hispanic origin:[b] 1994-1997

	1994	1995	1996	1997
All children	4	4	4	4
Race and Hispanic origin				
White	3	3	3	—
Black	2	2	2	—
Asian/Pacific Islander	25	28	27	—
Hispanic	14	14	13	—

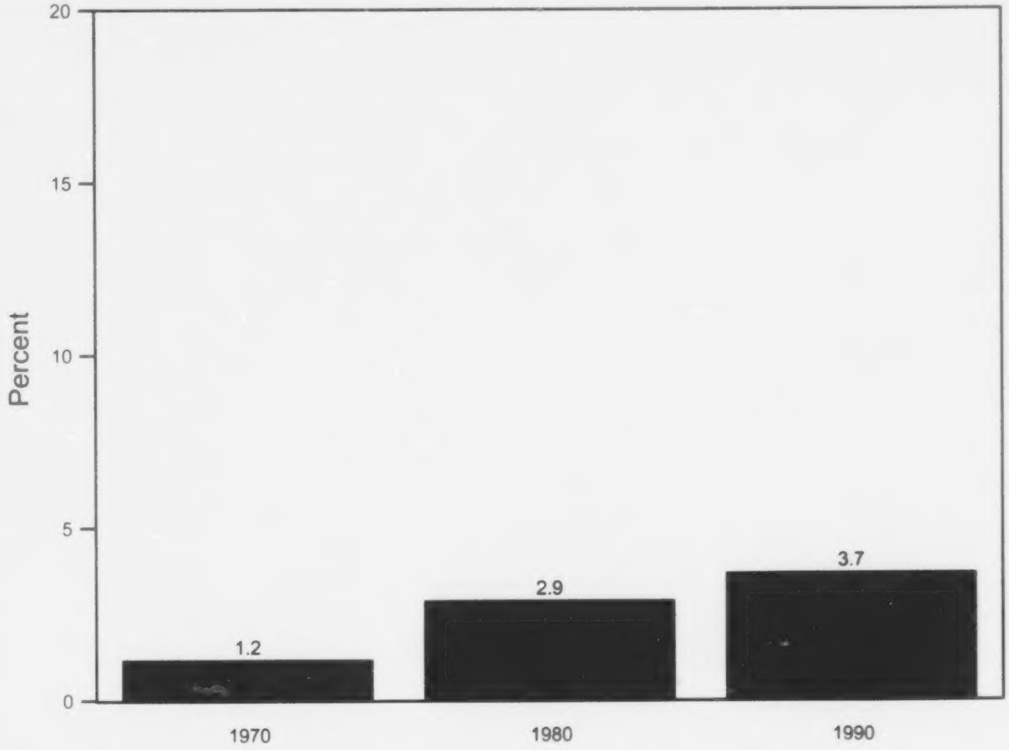
[a] Includes both immigrants and illegal aliens.

[b] Persons of Hispanic origin may be of any race. Estimates for whites, blacks, and Asians include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 486, Tables 1 and 2; U.S. Bureau of the Census, Paper Listing, Series PPL-58, The Foreign-Born Population, 1995, Detailed Tables, Tables 1 and 2; U.S. Bureau of the Census, Paper Listing, Series PPL-59, The Foreign-Born Population, 1996, Detailed Tables, Tables 1 and 2; U.S. Bureau of the Census, Paper Listing, Series PPL-92, The Foreign-Born Population, 1997, Detailed Tables, Tables 1 and 2. All percentages calculated by Child Trends, based on number estimates from these sources.

Figure PF 1.5.A

Percentage of children under age 20 in the United States who were foreign born:[a] 1970-1990

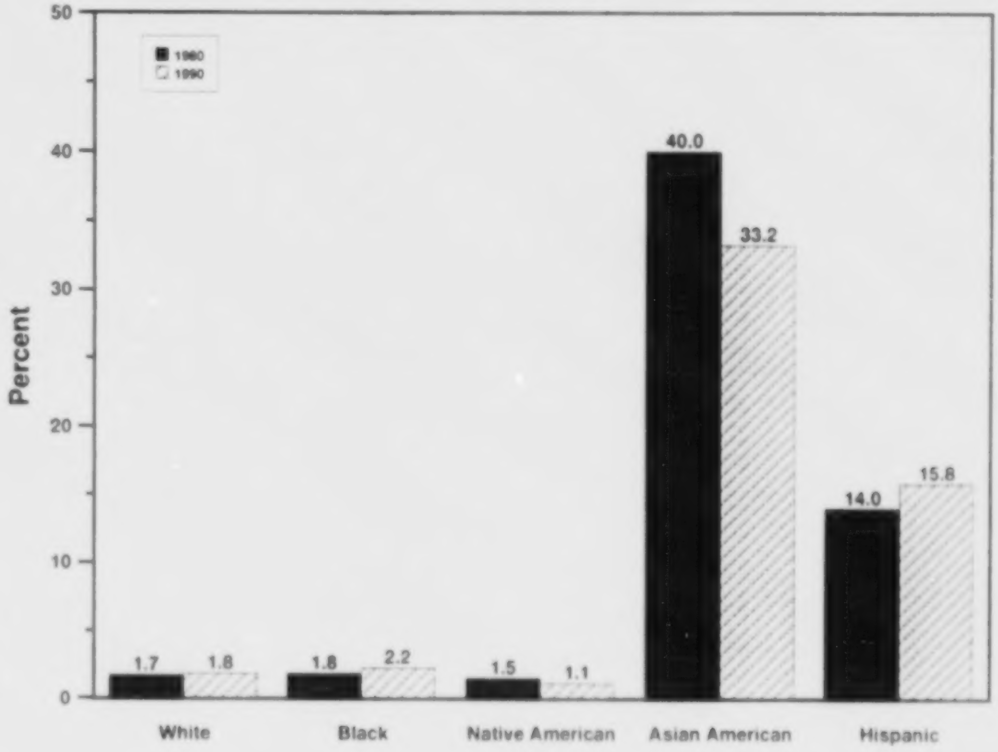


[a]Includes both immigrants and illegal aliens.

Source: U.S. Bureau of the Census, National Origin and Language, PC(2-1A), 1970; U.S. Bureau of the Census, Detailed Characteristics of the Population, 1980, Chapter D, U.S. Summary; U.S. Bureau of the Census, The Foreign-Born Population in the U.S., 1990, CP-3-1, and 1990 STF-3A census files.

Figure PF 1.5.B

Percentage of children under age 20 in the United States who were foreign born,[a] by race and Hispanic origin:[b] 1980 and 1990



[a] Includes both immigrants and illegal aliens.

[b] Persons of Hispanic origin may be of any race. Estimates for whites, blacks, Asian Americans, and Native Americans include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 486, Tables 1 and 2; U.S. Bureau of the Census, Paper Listing, Series PPL-58, The Foreign-Born Population, 1995, Detailed Tables, Tables 1 and 2; U.S. Bureau of the Census, Paper Listing, Series PPL-59, The Foreign-Born Population, 1996, Detailed Tables, Tables 1 and 2. All percentages calculated by Child Trends, based on number estimates from these sources.

PF 1.6

CHILDREN AS A PERCENTAGE OF THE DEPENDENT POPULATION

Children and senior citizens are less likely than other age groups to fully support themselves through participation in the labor market. Varying proportions of both the child population and the elderly population therefore receive income transfers, health care, and other services through public programs. This indicator looks at children (under age 18) as a percentage of the dependent population (children under age 18 and adults ages 65 and older).

Children's share of the dependent population fell from 79 percent in 1960 to 67 percent in 1990 and has remained unchanged since then (see Table PF 1.6). That percentage however, is projected to decline to 65 percent by the year 2010 and to 59 percent by 2020.

Differences by Race and Hispanic Origin.[1] The trend toward a larger senior population, relative to the child population, is occurring among all racial and ethnic groups. Between 1980 and 1990, children declined as a percentage of the dependent population across all racial and ethnic groups (see Figure PF 1.6). Population projections indicate that this decline will continue through 2020 for all groups.

Yet there are also considerable differences across groups in the number of children relative to senior citizens. There are far fewer white children relative to white senior citizens than there are minority children relative to minority seniors. In 1998, white children were estimated to make up about 61 percent of the white dependent population. Blacks are closest to whites, with children making up 79 percent of the combined child and elderly population total. Among Hispanics, children outnumber seniors by the greatest margin, with children estimated to account for 86 percent of the dependent population.

Table PF 1.6

Children in the United States as a percentage of the dependent population (persons ages 17 and under and ages 65 and over), by race and Hispanic origin:[a] selected years, 1960-1998, and projected for 2020.

	Estimated							Projected		
	1960	1970	1980	1990	1996	1997	1998	2000	2010	2020
All children under age 18	79	78	71	67	67	67	67	67	65	59
White, non-Hispanic	—	—	68	62	61	61	61	61	57	51
Black	—	—	82	79	79	79	79	80	78	73
Hispanic	—	—	89	87	86	86	86	85	83	78
Asian/ Pacific Islander[a]	—	—	88	85	81	80	80	80	76	71
American Indian/ Alaska Native[a]	—	—	84	82	84	84	84	83	80	75

[a] Persons of Hispanic origin may be of any race. Estimates for blacks, Asian/Pacific Islanders, and American Indian/Alaska Natives include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1095, Table 1; and No. 1130, Table 2; also unpublished data, U.S. Bureau of the Census. Estimates for "all children under age 18" as published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table POP2.

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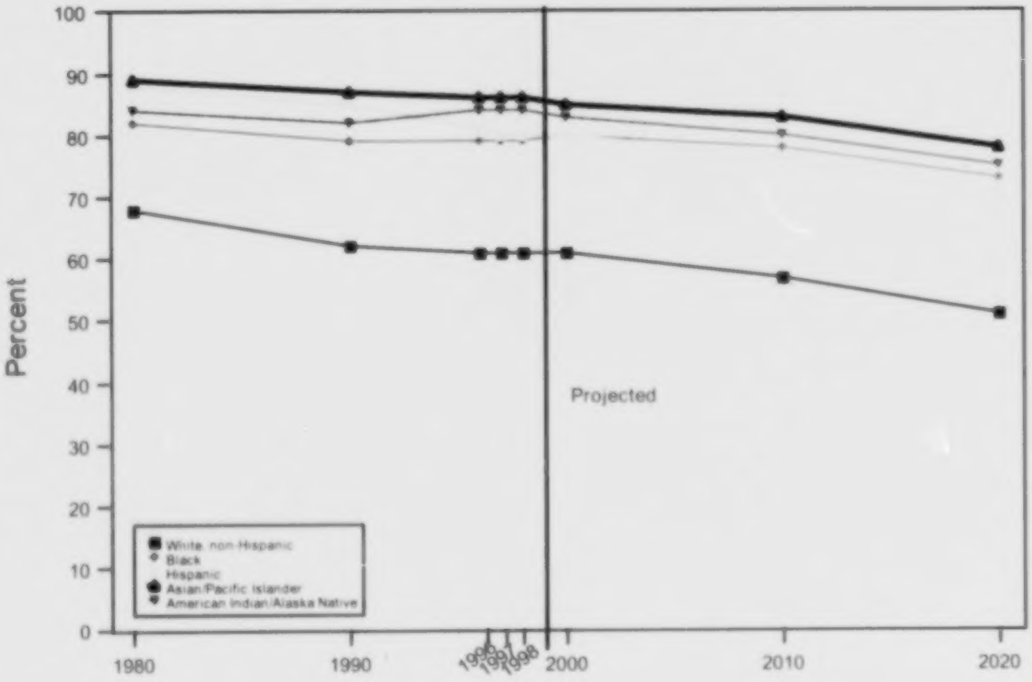
[1] Estimates for whites exclude Hispanics of that race.

Figure PF 1.6

Children in the United States as a percentage of the dependent population (persons ages 17 and under and ages 65 and over), by race and Hispanic origin:ᵃ selected years, 1980-1998, and projected 2000 through 2020.



ᵃPersons of Hispanic origin may be of any race. Estimates for blacks, Asian/Pacific Islanders, and American Indian/Alaska Natives include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1095, Table 1; and No. 1130, Table 2; also unpublished data, U.S. Bureau of the Census. Estimates for "all children under age 18" as published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table POP2.

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PF 1.7

FERTILITY RATE AND NUMBER OF BIRTHS

Changes in the fertility rate can have important consequences for society, as it is a major determinant of overall population growth and the age structure of the population.

The fertility rate in the United States dropped dramatically between 1960 and 1980 from 118.0 to 68.4 per 1,000 women ages 15 to 44 (see Figure PF 1.7.A). Since 1980, the rate has leveled off at between 65 and 71 per 1,000. The rate for 1997 is 65.0 births per 1,000. The number of births also dropped between 1960 and 1980 from about 4.3 million to 3.6 million (see Table PF 1.7.B). In 1997, there were about 3.9 million births.

Differences by Race and Hispanic Origin. In recent years, Hispanic women have had much higher fertility rates than women from the major race groups. In 1997, Hispanic women have a rate of 102.8 per 1,000, while white,[1] black, Asian, and American Indian women have rates that vary between about 64 and 71 per 1,000 (see Table PF 1.7.A).

Differences by Women's Age. The number and the percentage of all births to older women have increased substantially since 1980 (see Table PF 1.7.B and Figure PF 1.7.B). In 1980, 20 percent of all births were to women ages 30 and over. By 1997, that had risen to 35 percent.

Differences by Women's Education. In 1997, 845,497 births (or 22 percent of all births) were to women lacking high school degrees, and 872,733 births (also about 22 percent) were to women with four or more years of college (see Table PF 1.7.B).

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[1] Rates for non-Hispanic whites are even lower at 57.0 per 1,000 women ages 15 to 44 compared to 63.9 per 1,000 for all whites in 1997. See Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999.

SEE TABLE FOLLOWING PAGES

Table PF 1.7.A (Part 1)

Fertility rates in the United States by race and Hispanic origin and age of mother (births per 1,000 females in each age group): selected years, 1960-1997

	1960	1965	1970	1975	1980[a]	1985	1990	1991	1992	1993	1994	1995	1996	1997
All races														
All ages[b]	118.0	96.3	87.9	66.0	68.4	66.3	70.9	69.6	68.9	67.6	66.7	65.6	65.3	65.0
Ages 15-19	89.1	—	68.3	—	53.0	51.0	59.9	62.1	60.7	59.6	58.9	56.8	54.4	52.3
Ages 20-24	258.1	—	167.8	—	115.1	108.3	116.5	115.7	114.6	112.6	111.1	109.8	110.4	110.4
Ages 25-29	197.4	—	145.1	—	112.9	111.0	120.2	118.2	117.4	115.5	113.9	112.2	113.1	113.8
Ages 30-34	112.7	—	73.3	—	61.9	69.1	80.8	79.5	80.2	80.8	81.5	82.5	83.9	85.3
Ages 35-39	56.2	—	31.7	—	19.8	24.0	31.7	32.0	32.5	32.9	33.7	34.3	35.3	36.1
Ages 40-44	15.5	—	8.1	—	3.9	4.0	5.5	5.5	5.9	6.1	6.4	6.6	6.8	7.1
White[c]														
All ages[b]	113.2	—	84.1	—	65.6	64.1	68.3	67.0	66.5	65.4	64.9	64.4	64.3	63.9
Ages 15-19	79.4	—	57.4	—	45.4	43.3	50.8	52.8	51.8	51.1	51.1	50.1	48.1	46.3
Ages 20-24	252.8	—	163.4	—	111.1	104.1	109.8	109.0	108.2	106.9	106.2	106.3	107.2	106.7
Ages 25-29	194.9	—	145.9	—	113.8	112.3	120.7	118.8	118.4	116.6	115.5	114.8	116.1	116.6
Ages 30-34	109.6	—	71.9	—	61.2	69.9	81.7	80.5	81.4	82.1	83.2	84.6	86.3	87.8
Ages 35-39	54.0	—	30.0	—	18.8	23.3	31.5	31.8	32.2	32.7	33.7	34.5	35.6	36.4
Ages 40-44	14.7	—	7.5	—	3.5	3.7	5.2	5.2	5.7	5.9	6.2	6.4	6.7	6.9
Black[c]														
All ages[b]	153.5	—	115.4	—	84.7	78.8	86.8	85.2	83.2	80.5	76.9	72.3	70.7	70.7
Ages 15-19	156.1	—	140.7	—	97.8	95.4	112.8	115.5	112.4	108.6	104.5	96.1	91.4	88.2
Ages 20-24	295.4	—	202.7	—	140.0	135.0	160.2	160.9	158.0	152.6	146.0	137.1	136.8	139.0
Ages 25-29	218.6	—	136.3	—	103.9	100.2	115.5	113.1	111.2	108.4	104.0	98.6	98.2	99.5
Ages 30-34	137.1	—	79.6	—	59.9	57.9	68.7	67.7	67.5	67.3	65.8	64.0	63.3	64.3
Ages 35-39	73.9	—	41.9	—	23.5	23.9	28.1	28.3	28.8	29.2	28.9	28.7	29.1	29.7
Ages 40-44	21.9	—	12.5	—	5.6	4.6	5.5	5.5	5.6	5.9	5.9	6.0	6.1	6.5

[a] Beginning in 1980, births have been tabulated by the race and ethnicity of the mother. Previously, births are tabulated by race of child, assigning a child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite.

[b] Fertility rates were computed by relating total births, regardless of age of mother, to women ages 15 to 44.

[c] Includes persons of Hispanic origin.

[d] Persons of Hispanic origin may be of any race.

[e] Data for Hispanics have been available since 1978; 22 states reported Hispanic origin in 1980, representing 90 percent of the Hispanic population. Hispanic birth data are reported by 23 states and the District of Columbia in 1985; 48 states and the District of Columbia in 1990; 49 states and the District of Columbia in 1991 and 1992; and all 50 states and the District of Columbia in 1993 through 1997. Rates in 1985 were not calculated for Hispanics because estimates for populations were not available.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." National Vital Statistics Reports 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Tables 1, 4, and 9; Ventura, S.J. "Births of Hispanic Parentage, 1980." Monthly Vital Statistics Report 32 (6, Supp.). Hyattsville, Md.: National Center for Health Statistics, 1983, Table 5; also unpublished data, National Center for Health Statistics.

Table PF 1.7.A (Part 2)

Fertility rates in the United States by race and Hispanic origin and age of mother (births per 1,000 females in each age group): selected years, 1960-1997

	1960	1965	1970	1975	1980[a]	1985	1990	1991	1992	1993	1994	1995	1996	1997
Hispanic[d,e]														
All ages[b]	—	—	—	—	95.4	—	107.7	108.1	108.6	106.9	105.6	105.0	104.9	102.8
Ages 15-19	—	—	—	—	82.2	—	100.3	106.7	107.1	106.8	107.7	106.7	101.8	97.4
Ages 20-24	—	—	—	—	156.4	—	181.0	186.3	190.6	188.3	188.2	188.5	189.5	184.2
Ages 25-29	—	—	—	—	132.1	—	153.0	152.8	154.4	154.0	153.2	153.8	161.0	161.7
Ages 30-34	—	—	—	—	83.2	—	98.3	96.1	96.8	96.4	95.4	95.9	98.1	97.9
Ages 35-39	—	—	—	—	39.9	—	45.3	44.9	45.6	44.7	44.3	44.9	45.1	45.0
Ages 40-44	—	—	—	—	10.6	—	10.9	10.7	10.9	10.6	10.7	10.8	10.8	10.8
Asian/Pacific Islander[c]														
All ages[b]	—	—	—	—	73.2	68.4	69.6	67.6	67.2	66.7	66.8	66.4	65.9	66.3
Ages 15-19	—	—	—	—	26.2	23.8	26.4	27.4	26.6	27.0	27.1	26.1	24.6	23.7
Ages 20-24	—	—	—	—	93.3	83.6	79.2	75.2	74.6	73.3	73.1	72.4	70.7	70.5
Ages 25-29	—	—	—	—	127.4	123.0	126.3	123.2	121.0	119.9	118.6	113.4	111.2	113.2
Ages 30-34	—	—	—	—	96.0	93.6	106.5	103.3	103.0	103.9	105.2	106.9	109.2	110.3
Ages 35-39	—	—	—	—	38.3	42.7	49.6	49.0	50.6	50.2	51.3	52.4	52.2	54.1
Ages 40-44	—	—	—	—	8.5	8.7	10.7	11.2	11.0	11.3	11.6	12.1	12.2	11.9
American Indian[c]														
All ages[b]	—	—	—	—	82.7	78.6	76.2	75.1	[illegible]5.4	73.4	70.9	69.1	68.7	69.1
Ages 15-19	—	—	—	—	82.2	79.2	81.1	85.0	84.4	83.1	80.8	78.0	73.9	71.8
Ages 20-24	—	—	—	—	143.7	139.1	148.7	144.9	145.5	139.8	134.2	132.5	133.9	134.9
Ages 25-29	—	—	—	—	106.6	109.6	110.3	106.9	109.4	107.6	104.1	98.4	98.5	100.8
Ages 30-34	—	—	—	—	61.8	62.6	61.5	61.9	63.0	62.8	61.2	62.2	63.2	64.2
Ages 35-39	—	—	—	—	28.1	27.4	27.5	27.2	28.0	27.6	27.5	27.7	28.5	29.3
Ages 40-44	—	—	—	—	8.2	6.0	5.9	5.9	6.1	5.9	5.9	6.1	6.3	6.4

[a] Beginning in 1980, births have been tabulated by the race and ethnicity of the mother. Previously, births are tabulated by race of child, assigning a child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite.

[b] Fertility rates were computed by relating total births, regardless of age of mother, to women ages 15 to 44.

[c] Includes persons of Hispanic origin.

[d] Persons of Hispanic origin may be of any race.

[e] Data for Hispanics have been available since 1978; 22 states reported Hispanic origin in 1980, representing 90 percent of the Hispanic population. Hispanic birth data are reported by 23 states and the District of Columbia in 1985; 48 states and the District of Columbia in 1990; 49 states and the District of Columbia in 1991 and 1992; and all 50 states and the District of Columbia in 1993 through 1997. Rates in 1985 were not calculated for Hispanics because estimates for populations were not available.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." National Vital Statistics Reports 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Tables 1, 4, and 9; Ventura, S.J. "Births of Hispanic Parentage, 1980." Monthly Vital Statistics Report 32 (6, Supp.). Hyattsville, Md.: National Center for Health Statistics, 1983, Table 5; also unpublished data, National Center for Health Statistics.

Table PF 1.7.B

Number of births in the United States by mother's age, race and Hispanic origin, marital status, and education level: selected years, 1960-1997

	1960	1970	1980[a]	1985	1990	1995	1996	1997
Age of mother								
All Ages	4,257,850	3,731,386	3,612,258	3,760,561	4,158,212	3,899,589	3,891,494	3,880,894
Ages 15-19	586,966	644,708	552,161	467,485	521,826	499,873	491,577	483,220
Ages 20-24	1,426,912	1,418,874	1,226,200	1,141,320	1,093,730	965,547	945,210	942,048
Ages 25-29	1,092,816	994,904	1,108,291	1,201,350	1,277,108	1,063,539	1,071,287	1,069,436
Ages 30-34	687,722	427,806	550,354	696,354	886,063	904,666	897,913	886,798
Ages 35-39	359,908	180,244	140,793	214,336	317,583	383,745	399,510	409,710
Ages 40-44	91,564	49,952	23,090	28,334	48,607	67,250	71,804	76,084
Race and Hispanic origin[b]								
White	3,600,744	3,091,264	2,936,351	3,037,913	3,290,273	3,098,885	3,093,057	3,072,640
Black	602,264	572,362	568,080	581,824	684,336	603,139	594,781	599,913
Hispanic[c]	—	—	307,163	372,814	595,073	679,768	701,339	709,767
Marital status[d]								
Married	4,033,550	3,332,686	2,946,511	2,932,387	2,992,828	2,645,613	2,631,188	2,623,450
Unmarried	224,300	398,700	665,747	828,174	1,165,384	1,253,976	1,260,306	1,257,444
Education level								
Less than high school	—	—	—	—	—	867,552	859,771	845,497
Completed high school	—	—	—	—	—	1,307,228	1,281,198	1,257,946
At least some college	—	—	—	—	—	845,110	847,139	848,379
Four or more years of college	—	—	—	—	—	820,325	847,824	872,733

[a] Births from 1980 onward are by race of mother. Tabulations prior to 1980 are by race of child, which assigns the child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite.

[b] Estimates for white and black mothers include Hispanics of those races. Persons of Hispanic origin may be of any race.

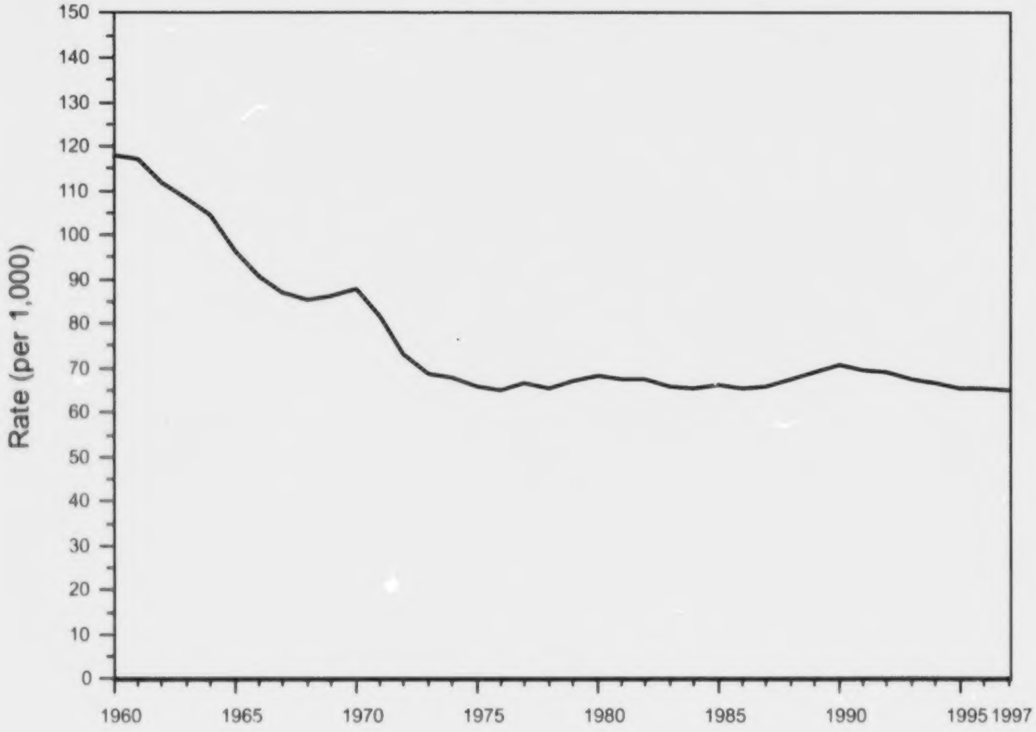
[c] Births by Hispanic origin in 1980 are based on data from 22 states that report Hispanic origin on the birth certificate; 23 states and the District of Columbia in 1985; 48 states and the District of Columbia in 1990; and 50 states and the District of Columbia in 1995 through 1997.

[d] From 1980 onward, data for states in which marital status was not reported have been inferred and included with data from the remaining states. Prior to 1980, births by marital status are estimated for the United States from registration areas in which marital status of mother was reported. See "Report of Final Natality Statistics", 1995, referenced below.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." National Vital Statistics Reports 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Table 2, 17, and 21; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Report of Final Natality Statistics, 1996. Monthly Vital Statistics Report 46 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, 1998, Tables 2, 17, and 21; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Report of Final Natality Statistics, 1995." Monthly Vital Statistics Report 45 (11, Supp. 2). Hyattsville, Md.: National Center for Health Statistics, 1997, Tables 2, 6, 14, and 18; National Center for Health Statistics. Vital Statistics of the United States, 1990, Vol. I, Natality. Washington, D.C.: Public Health Service. 1994, Table 1-35.; also the 1985 (Table 1-54), 1980 (Table 1-54), and 1970 editions of this annual report; National Center for Health Statistics. "Advance Report of Final Natality Statistics, 1985." Monthly Vital Statistics Report 36 (4, Supp.). Hyattsville, Md.: Public Health Service. 1987, Table 2; National Center for Health Statistics. "Advance Report of Final Natality Statistics, 1980." Monthly Vital Statistics Report 31 (8, Supp.). Hyattsville, Md.: Public Health Service. 1982, Table 2; Ventura, S.J. "Births of Hispanic Parentage, 1980." Monthly Vital Statistics Report 32 (6, Supp.). Hyattsville, Md.: National Center for Health Statistics. 1983, Table 2; National Center for Health Statistics. "Summary Report of Final Natality Statistics, 1970." Monthly Vital Statistics Report 22 (12, Supp.). Rockville, Md.: Public Health Service, 1974, Table 2; and Ventura, S.J. "Births to Unmarried Mothers: United States, 1980-1992." Vital and Health Statistics 21(53). Hyattsville, Md.: National Center for Health Statistics, 1995, Table H.

Figure PF 1.7.A

Overall fertility rate (per 1,000 women ages 15-44)[a] in the United States: 1960-1997

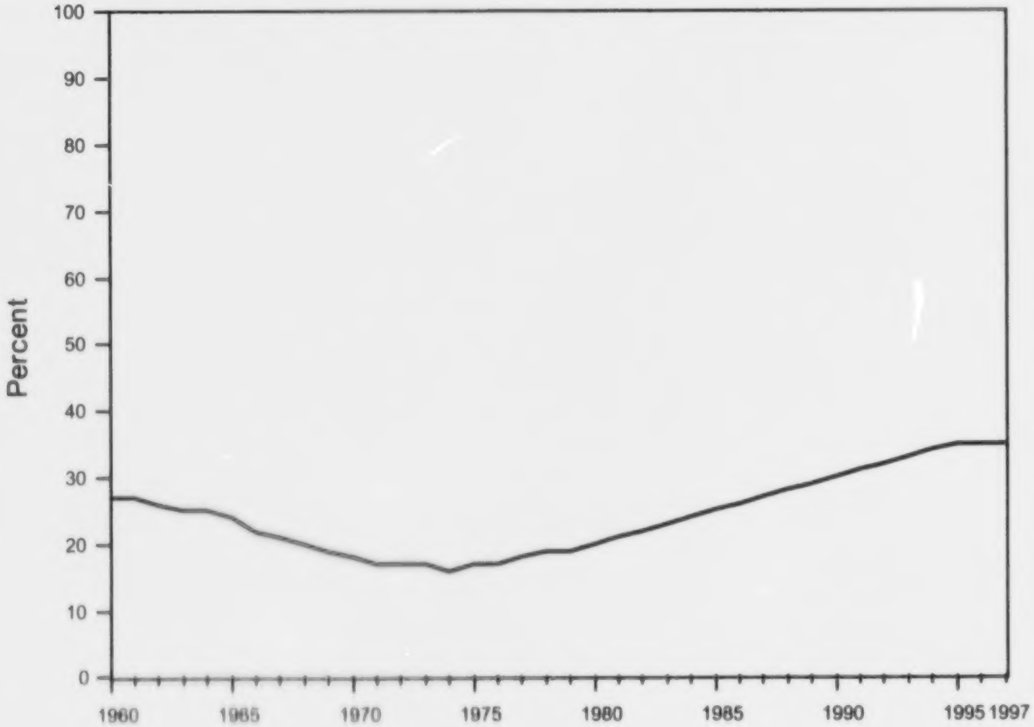


[a] Fertility rates were computed by relating total births, regardless of age of mother, to women ages 15 to 44.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." National Vital Statistics Reports 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Tables 4 and 9.

Figure PF 1.7.B

Percentage of all births in the United States to women ages 30 and older: 1960-1997



Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." National Vital Statistics Reports 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Tables 2, 17, and 21; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Report of Final Natality Statistics, 1996." Monthly Vital Statistics Report 45 (11, Supp. 2). Hyattsville, Md.: National Center for Health Statistics, 1998, Tables 2, 17, and 21; National Center for Health Statistics. Vital Statistics of the United States, 1990, Vol. I, Natality. Washington, D.C.: Public Health Service. 1994, Table 1-35; Also other editions of this annual report (Table 1-54 in each); National Center for Health Statistics. "Advance Report of Final Natality Statistics, 1985." Monthly Vital Statistics Report 36 (4, Supp.). Hyattsville, Md.: Public Health Service. 1987, Table 2; National Center for Health Statistics. "Advance Report of Final Natality Statistics, 1980." Monthly Vital Statistics Report 31 (8, Supp.). Hyattsville, Md.: Public Health Service. 1982, Table 2; Ventura, S.J. "Births of Hispanic Parentage, 1980." Monthly Vital Statistics Report 32 (6, Supp.). Hyattsville, Md.: National Center for Health Statistics. 1983, Table 2; National Center for Health Statistics. "Summary Report Final Natality Statistics, 1970." Monthly Vital Statistics Report 22 (12, Supp.). Rockville, Md.: Public Health Service. 1974, Table 2; and Ventura, S.J. "Births to Unmarried Mothers: United States, 1980-92". Vital and Health Statistics 21(53). Hyattsville, Md.: National Center for Health Statistics, 1995, Table H.

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PF 2.1

PERCENTAGE DISTRIBUTION OF CHILDREN IN THE UNITED STATES BY NUMBER OF PARENTS IN HOUSEHOLD

Family structure is one of many factors that contributes to child well-being. It also is associated with the well-being of the child as an adult. For example, children from disrupted families or families where the parents never married are somewhat more likely to use alcohol and drugs, to become teen parents, and to achieve lower earnings than are children from intact families, and they are less likely to attain a high school diploma. These associations are evident even after controlling for family socioeconomic status, race, and other background factors.[3] Nevertheless, the great majority of children brought up in single-parent families do well. In particular, differences in well-being between children from divorced and those from intact families tend, on average, to be moderate to small.[4]

Between 1970 and 1998, the proportion of children in two-parent families (about 84 percent of whom live with both biological parents present)[5] decreased from 85 percent to 68 percent (see Table PF 2.1.A).

In 1998, 23 percent of children lived with mother only; 4 percent lived with father only;[6] and 4 percent lived with neither parent (see Table PF 2.1.A).[7] Of those who lived with neither parent, more than one-half were residing with one or more grandparents as of 1993 (see Table PF 2.1.C).

Differences by Race and Hispanic Origin. The decrease in the proportion of children living in two-parent families is evident for black, white, and Hispanic children, though the decline is somewhat steeper for black children. Between 1970 and 1998, the proportion of black children living in two-parent families fell by 22 percentage points from 58 percent to 36 percent, though between 1996 and 1998 that percentage increased modestly from a low of 33 percent. The drop for white children was 16 percentage points, from 90 percent to 74 percent. For Hispanic children, the percentage living in two-parent families decreased from 78 percent to 64 percent.

Table PF 2.1.B presents 1980 and 1990 census data for Asian and Native American families in addition to data on white, black, and Hispanic families. The percentage of children living in two-parent families dropped for all five groups during that period. In 1990, Asian children were the most likely to live in a two-parent household (84 percent), followed closely by whites (82 percent), then Hispanics (71 percent), Native Americans (64 percent), and blacks (47 percent).

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[3] Amato, P.R. 1993. "Children's Adjustment to Divorce: Theories, Hypotheses, and Empirical Support." *Journal of Marriage and the Family* 55: 23-58.

[4] Zill, N., Morrison, D., and Coiro, M. 1993. "Long-Term Effects of Parental Divorce on Parent-Child Relationships: Adjustment and Achievement in Early Adulthood." *Journal of Family Psychology* 7 (1): 91-103.

[5] Analyses by Child Trends of the 1993 Survey of Income and Program Participation indicates that 84 percent of children in married-couple families live with both biological parents (see Table PF 2.1.C).

[6] The Current Population Survey overestimates the proportion of children living in father-only families, because it identifies many cohabiting biological-parent couples as father-only. Though the precise size of the overestimate is not known, analyses of the 1993 Survey of Income and Program Participation indicate that a little over 2 percent of all children actually lived in father-only families in that year (see Table PF 2.1.C).

[7] Data from the 1996 Current Population Survey (not shown) indicate that 11 percent of all children under age 18 who are living in families live with single parents who are divorced. See Saluter, A. 1997. *PPL-66, Household and Family Characteristics: March 1996 (Update),* U.S. Bureau of the Census.

Table PF 2.1.A

Percentage distribution of living arrangements of children under age 18 in the United States, by race and Hispanic origin:[a] selected years, 1970-1998

	1970	1980	1990	1991	1992	1993	1994	1995[b]	1996[b]	1997[b]	1998[b]
Total											
Two parents	85	77	73	72	71	71	69	69	68	68	68
Mother only	11	18	22	22	23	23	23	23	24	24	23
Father only	1	2	3	3	3	3	3	4	4	4	4
No parent	3	4	3	3	3	3	4	4	4	4	4
White											
Two parents	90	83	79	78	77	77	76	76	75	75	74
Mother only	8	14	16	17	18	17	18	18	18	18	18
Father only	1	2	3	3	3	3	3	3	4	4	5
No parent	2	2	2	2	2	2	3	3	3	3	3
Black											
Two parents	58	42	38	36	36	36	33	33	33	35	36
Mother only	30	44	51	54	54	54	53	52	53	52	51
Father only	2	2	4	4	3	3	4	4	4	5	4
No parent	10	12	8	7	7	7	10	11	9	8	9
Hispanic[a]											
Two parents	78	75	67	66	65	65	63	63	62	64	64
Mother only	—	20	27	27	28	28	28	28	29	27	27
Father only	—	2	3	3	4	4	4	4	4	4	4
No parent	—	3	3	4	3	4	5	4	5	5	5

[a] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

[b] Numbers in these years may reflect changes in the Current Population Survey because of newly instituted computer-assisted interviewing techniques and/or because of the change in the population controls to the 1990 Census-based estimates, with adjustments.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 410, No. 461, No. 468, No. 478, No. 491, No. 496u, No. 506u, No. 514u (Table 4 in each); and No. 484, Table A-5; also unpublished data, U.S. Bureau of the Census. As published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table POP5.

Table PF 2.1.B

Percentage distribution of families in the United States with own children under age 18, by race and Hispanic origin[a] and family structure: 1980 and 1990

	1980	1990
Total		
Married couple	81.5	77.1
Female head	16.1	17.7
Male head	2.4	4.1
White		
Married couple	85.7	82.2
Female head	12.1	14.0
Male head	2.2	3.7
Black		
Married couple	54.3	46.9
Female head	41.7	47.6
Male head	4.0	5.5
Hispanic		
Married couple	76.6	71.4
Female head	20.4	22.1
Male head	3.1	6.5
Asian/Pacific Islander		
Married couple	88.5	84.3
Female head	9.4	9.8
Male head	2.1	2.9
American Indian/Alaska Native		
Married couple	71.5	63.6
Female head	24.2	28.7
Male head	4.3	7.8

[a] Persons of Hispanic origin may be of any race. Estimates for whites, blacks, Asian/Pacific Islanders, and American Indian/Alaska Natives include persons of Hispanic origin.

Sources: "The Challenge of Change: What the 1990 Census Tells Us About Children," Table 14, prepared by the Population Reference Bureau for the Center for the Study of Social Policy, with data from the U.S. Bureau of the Census, 1980 Census of Population, "General Social and Economic Characteristics," PC80-1-C1, United States Summary, Tables 100, 121, and 131; and Census of Population and Housing 1990, Summary Tape File 3, Tables P-19, P-20, and P-21.

Table PF 2.1.C

Percentage distribution of children under age 18 in the United States in two-parent, one-parent, or no-parent families, by age, race and Hispanic origin[b], poverty status, and parent's education level: 1993

	Two-Parent Families			Single-Parent Families			No Parents Present	
	Total[a]	Biological Parents	One Biological, One Step-parent	Total[a]	Biological Mother	Biological Father	Total[a]	Grandparents
All children	70.8	59.8	7.1	26.5	22.6	2.1	2.4	1.5
Ages 0-5	72.8	67.4	1.8	25.4	22.5	1.2	1.8	1.3
Ages 6-11	70.8	58.9	7.9	26.7	22.8	1.9	2.4	1.8
Ages 12-17	68.8	52.3	12.2	27.5	22.4	3.2	3.2	1.6
Race and Hispanic origin[b]								
White, non-Hispanic	80.1	67.8	8.2	18.4	15.2	2.2	1.4	0.9
Black, non-Hispanic	35.9	28.2	4.4	56.9	48.9	2.2	7.1	4.7
Hispanic	61.5	52.9	5.6	35.3	32.6	1.4	2.7	1.6
Poverty status								
Below poverty	37.1	31.1	3.5	58.4	52.4	1.9	4.2	2.5
At or above poverty	80.6	68.2	8.2	17.2	13.9	2.1	1.9	1.2
Parent's education level[c]								
Less than high school	45.2	38.7	4.3	54.8	47.3	2.6		
Completed high school	67.8	55.8	8.1	32.2	27.2	2.8		
At least some college	76.5	63.1	9.4	23.5	20.3	1.9		
Four or more years of college	90.3	79.1	6.2	9.7	7.8	1.3		

[a] Totals for two-parent, one-parent, and no-parent families include categories beyond those presented separately.

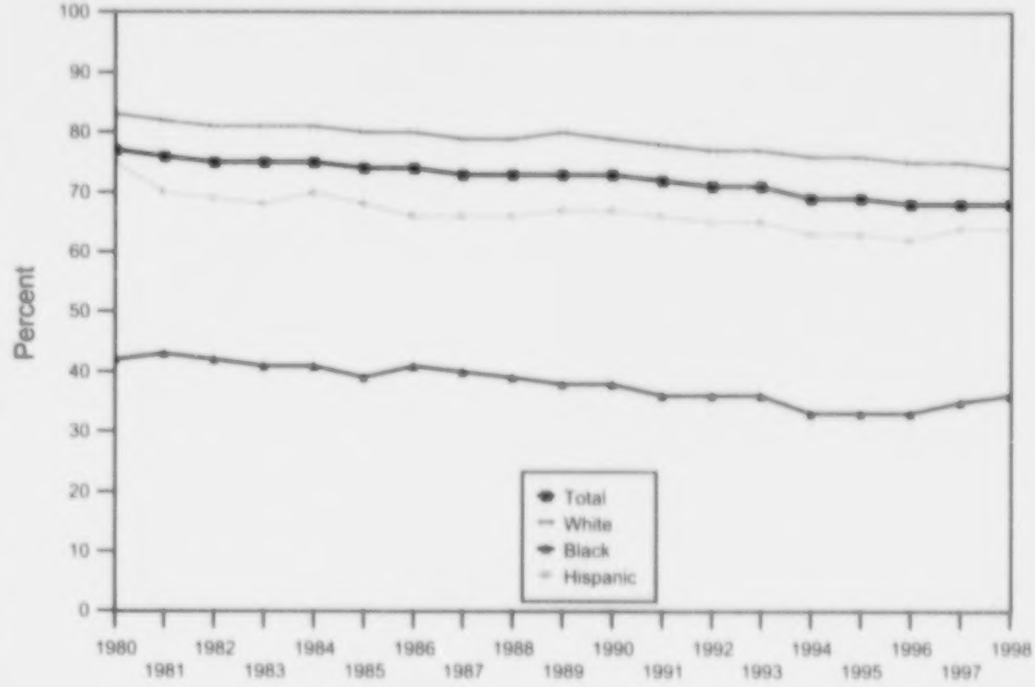
[b] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

[c] Education level in two-parent families is determined by the higher educated parent.

Source: Survey of Income and Program Participation, 1993. Analysis by Child Trends.

Figure PF 2.1

Percentage of children under age 18 in the United States who are living with two parents, by race and Hispanic origin:[a] 1980-1998[b]



[a] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

[b] Numbers in the years 1994 and beyond may reflect changes in the Current Population Survey because of newly constituted computer-assisted interviewing techniques and/or because of the change in the population controls to the 1990 Census-based estimates, with adjustments.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 410, No. 461, No. 468, No. 478, No. 491, No. 496u, No. 506u, No. 514u (Table 4 in each); and No. 484, Table A-5; also unpublished data, U.S. Bureau of the Census. As published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table POP5.

PF 2.2

PERCENTAGE OF ALL BIRTHS TO UNMARRIED WOMEN

Children who are born to single women, regardless of the age of the women, are considerably more likely than children born to two parents to grow up poor, to spend large portions of their childhood without two parents, and to become single parents themselves.[8]

Between 1960 and 1994, there was a considerable increase in the percentage of all births to unmarried women, from 5.3 percent in 1960 to 32.6 percent in 1994 (see Figure PF 2.2). The percentage has been fairly stable in the last several years and was 32.4 percent in 1997.

Differences by Age. Nonmarital childbearing increased among women of all age groups between 1960 and 1994 before dropping off modestly in 1995 (see Table PF 2.2). However, data for 1996 and for 1997 show slight increases for women ages 15 through 19 and 20 through 24. Younger mothers are far more likely than older mothers to be unmarried. In 1997, 77.8 percent of births to women ages 15 through 19 were to unmarried women. In contrast, 46.6 percent of births to women ages 20 through 24 were to unmarried women, and only 14.1 percent of births to women ages 30 through 34 were to unmarried women.

Contrary to popular opinion, nonmarital childbearing does not occur primarily among teenagers. In 1997, about 31 percent of nonmarital births were to teenagers (women under age 20), about 35 percent were to women ages 20 through 24, and 34 percent were to women ages 25 and older.[9]

Differences by Race and Hispanic Origin. The percentage of all births to unmarried women increased steadily for whites, blacks, and Hispanics between 1980 and 1994, before declining for these three groups in 1995.[10] Data for 1997, however, indicate that whites have resumed their upward trend at 25.8 percent. Among American Indian women, percentages have increased steadily between 1980 and 1997. Asian women have experienced a steady increase in the percentage of all births to unmarried women from 1980 to 1996, but the percentage decreased in 1997.

In 1997, Asian and white women had the lowest percentage of nonmarital births at 15.6 and 25.8 percent, respectively.[11] Hispanics were next at 40.9 percent, followed by American Indian and black women at 58.7 percent and 69.2 percent, respectively. This ordering is the same for most age groups, though the size of the difference can vary substantially by the age of the mother. For young women ages 15 through 19 in 1997, for example, whites and Hispanics have very similar percentages of births to unmarried women—71.1 and 71.6 percent, respectively—while the percentage among young black women ages 15 through 19 is much higher at 95.7 percent. By ages 25 through 29, however, percentages for Hispanic women move midway between white and black rates, with whites at 16.9 percent, Hispanics at 30.4 percent, and blacks at 56.8 percent (see Table PF 2.2).

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[8] See Ventura, S.J. 1995. "Births to Unmarried Mothers: United States, 1980-1992." *Vital and Health Statistics*, Series 21, No. 53, U.S. Department of Health and Human Services, Public Health Service. See also McLanahan, S., and Sandefur, G. 1994. *Growing Up with a Single Parent: What Hurts, What Helps*. Cambridge, Mass.: Harvard University Press. See also U.S. Department of Health and Human Services. 1995. *Report to Congress on Out-of-Wedlock Childbearing*. DHHS Publication Number (PHS) 95-1257. Hyattsville, Md.

[9] Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Table 17.

[10] Data are available for whites from 1960 and for blacks from 1970, indicating that the percentage of births that were nonmarital had also been increasing prior to 1980 for those races. Data for Hispanics are only available starting in 1980.

[11] Percentages for non-Hispanic whites (not shown) are even lower at 21.5 percent in 1997. See Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Table 17.

SEE TABLE FOLLOWING PAGES

Table PF 2.2 (Part 1)

Percentage of all births to unmarried women in the United States, by race and Hispanic origin[a] and by age: selected years, 1960-1997[b]

	1960	1965	1970	1975	1980[b]	1985	1990	1991	1992	1993	1994	1995	1996	1997
All races														
All ages	5.3	7.7	10.7	14.3	18.4	22.0	28.0	29.5	30.1	31.0	32.6	32.2	32.4	32.4
Ages 15-19	14.8	20.8	29.5	38.2	47.6	58.0	67.1	68.8	70.0	71.3	75.5	75.2	75.9	77.8
Ages 20-24	4.8	6.8	8.9	12.3	19.4	26.3	36.9	39.4	40.7	42.2	44.9	44.7	45.6	46.6
Ages 25-29	2.9	4.0	4.1	5.4	9.0	12.7	18.0	19.2	19.8	20.7	21.8	21.5	22.0	22.0
Ages 30-34	2.8	3.7	4.5	5.3	7.5	9.7	13.3	14.0	14.3	14.7	15.1	14.7	14.8	14.1
Ages 35-39	3.0	4.0	5.2	7.0	9.4	11.2	13.9	14.6	15.2	15.6	16.1	15.7	15.7	14.6
White[c]														
All ages	2.3	—	5.7	—	11.2	14.7	20.4	21.8	22.6	23.6	25.5	25.3	25.7	25.8
Ages 15-19	7.2	—	17.1	—	33.1	44.8	56.4	58.8	60.4	62.3	67.6	67.7	68.7	71.1
Ages 20-24	2.2	—	5.2	—	11.7	17.7	27.8	30.2	31.7	33.4	36.3	36.5	37.5	38.4
Ages 25-29	1.1	—	2.1	—	5.2	8.1	12.6	13.7	14.3	15.2	16.5	16.4	16.9	16.9
Ages 30-34	1.0	—	2.1	—	4.6	6.3	9.3	9.8	10.2	10.6	11.1	10.9	11.1	10.5
Ages 35-39	1.3	—	2.7	—	6.4	8.1	10.3	10.9	11.4	11.7	12.3	12.0	12.2	11.2
Black[c]														
All ages	—	—	37.6	—	56.1	61.2	66.5	67.9	68.1	68.7	70.5	69.9	69.8	69.2
Ages 15-19	—	—	62.7	—	85.7	90.2	92.0	92.3	92.6	92.9	95.3	95.2	95.4	95.7
Ages 20-24	—	—	31.3	—	57.0	65.4	72.6	74.7	75.2	76.7	79.0	79.1	79.7	79.8
Ages 25-29	—	—	20.3	—	36.8	45.2	53.3	54.7	55.0	55.8	57.3	56.8	57.4	56.8
Ages 30-34	—	—	19.6	—	29.6	37.0	45.2	46.5	46.7	46.9	47.4	46.5	45.7	44.1
Ages 35-39	—	—	18.6	—	28.4	35.1	42.0	43.8	44.7	44.8	45.8	45.3	44.3	42.7

[a] Persons of Hispanic origin may be of any race.

[b] Births from 1980 onward by race of mother. Tabulations prior to 1980 are by race of child, which assigns the child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite.

[c] Includes persons of Hispanic origin.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." National Vital Statistics Reports 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Tables 2 and 7; Ventura, S.J. "Births to Unmarried Mothers: United States, 1980-1992." Vital and Health Statistics, Series 21, No. 53. U.S. Department of Health and Human Services, Public Health Service. 1995, Table 5; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Report of Final Natality Statistics, 1996." Monthly Vital Statistics Report 46 (11, Supp.). Hyattsville, Md: National Center for Health Statistics, 1998, Table 17. Also previous issues of this annual report (Volume 45, no. 11; Volume 44, no. 11; Volume 44, no. 3, Table 14 in each); Ventura, S.J. "Births of Hispanic Parentage, 1985." Monthly Vital Statistics Report 36 (11, Supp.). Hyattsville, Md.: Public Health Service, Tables 6 and 7; Ventura, S.J. "Births of Hispanic Parentage, 1980." Monthly Vital Statistics Report 32 (6, Supp.). Hyattsville, Md.: Public Health Service. 1983, Table 11; unpublished data from S. Ventura, National Center for Health Statistics.

Table PF 2.2 (Part 2)

Percentage of all births to unmarried women in the United States, by race and Hispanic origin[a] and by age: selected years, 1960-1997[b]

	1960	1965	1970	1975	1980[b]	1985	1990	1991	1992	1993	1994	1995	1996	1997
Hispanic[a]														
All ages	—	—	—	—	23.6	29.5	36.7	38.5	39.1	40.0	43.1	40.8	40.7	40.9
Ages 15-19	—	—	—	—	41.9	51.3	53.7	61.2	61.9	62.8	69.7	67.3	67.7	71.6
Ages 20-24	—	—	—	—	23.8	30.9	35.1	41.5	42.3	43.4	47.0	45.0	45.2	46.1
Ages 25-29	—	—	—	—	15.9	22.2	25.7	30.3	30.8	31.7	33.2	31.1	31.2	30.4
Ages 30-34	—	—	—	—	15.2	19.6	23.0	26.6	27.2	27.5	28.6	26.4	26.0	24.6
Ages 35-39	—	—	—	—	16.2	20.8	23.2	27.6	28.5	29.0	30.3	27.4	26.9	25.7
Asian/Pacific Islander[c]														
All ages	—	—	—	—	7.3	9.5	13.2	13.9	14.7	15.7	16.2	16.3	16.7	15.6
Ages 15-19	—	—	—	—	40.6	47.7	57.0	58.4	59.6	60.7	62.7	63.1	62.7	72.0
Ages 20-24	—	—	—	—	10.9	15.5	23.5	25.1	27.0	29.0	30.0	30.1	31.0	31.8
Ages 25-29	—	—	—	—	4.2	5.7	8.3	8.8	9.6	10.6	11.3	12.1	12.9	11.5
Ages 30-34	—	—	—	—	3.0	4.6	6.3	6.4	7.1	7.7	8.0	8.0	8.9	6.6
Ages 35-39	—	—	—	—	4.0	5.8	7.5	7.9	8.4	9.0	8.8	8.9	9.2	6.9
American Indian[c]														
All ages	—	—	—	—	39.2	46.8	53.6	55.3	55.3	55.8	57.0	57.2	58.0	58.7
Ages 15-19	—	—	—	—	61.9	72.5	78.9	79.1	80.3	80.6	82.9	82.5	84.1	84.4
Ages 20-24	—	—	—	—	38.6	48.5	57.2	58.7	58.6	59.5	60.6	60.7	61.7	63.2
Ages 25-29	—	—	—	—	28.1	35.9	43.2	45.2	45.3	45.2	45.5	45.7	46.4	47.3
Ages 30-34	—	—	—	—	22.2	31.8	38.3	39.0	39.6	40.0	40.6	40.6	41.4	41.2
Ages 35-39	—	—	—	—	22.5	27.7	35.5	38.8	38.2	38.1	38.5	40.6	40.1	40.3

[a] Persons of Hispanic origin may be of any race.

[b] Births from 1980 onward by race of mother. Tabulations prior to 1980 are by race of child, which assigns the child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite.

[c] Includes persons of Hispanic origin.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." National Vital Statistics Reports 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Tables 2 and 7; Ventura, S.J. "Births to Unmarried Mothers: United States, 1980-1992." Vital and Health Statistics, Series 21, No. 53. U.S. Department of Health and Human Services, Public Health Service. 1995, Table 5; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Report of Final Natality Statistics, 1996." Monthly Vital Statistics Report 46 (11, Supp.). Hyattsville, Md: National Center for Health Statistics, 1998, Table 17. Also previous issues of this annual report (Volume 45, no. 11; Volume 44, no. 11; Volume 44, no. 3, Table 14 in each); Ventura, S.J. "Births of Hispanic Parentage, 1985." Monthly Vital Statistics Report 36 (11, Supp.). Hyattsville, Md.: Public Health Service, Tables 6 and 7; Ventura, S.J. "Births of Hispanic Parentage, 1980." Monthly Vital Statistics Report 32 (6, Supp.). Hyattsville, Md.: Public Health Service. 1983, Table 11; unpublished data from S. Ventura, National Center for Health Statistics.

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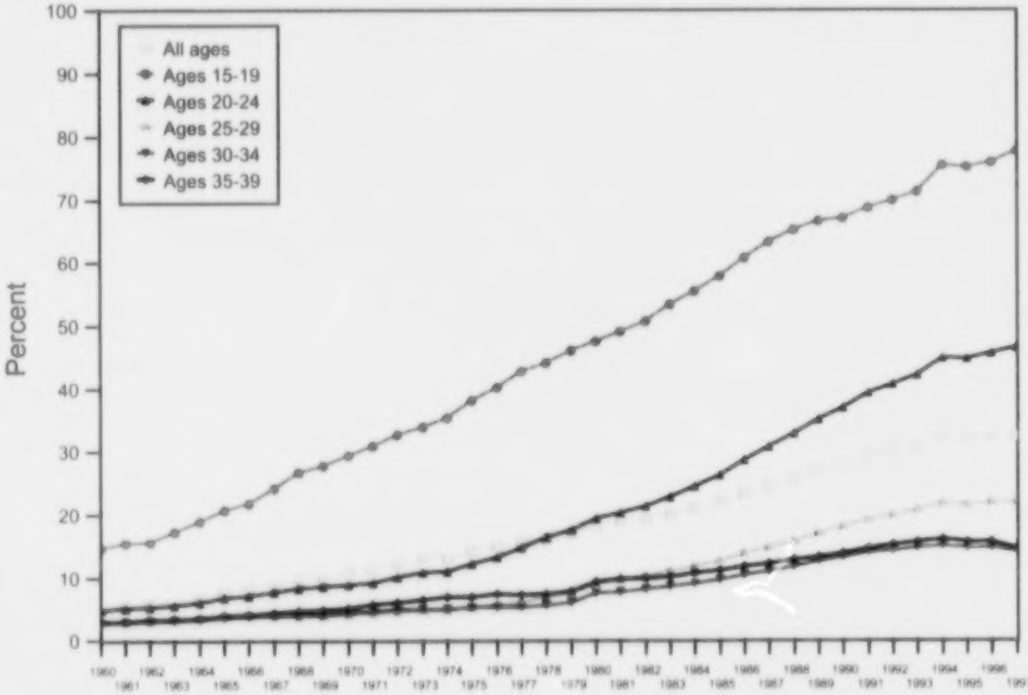
Figure PF 2.2

Percentage of all births to unmarried women in the United States, by age: 1960-1997



Sources: Ventura, S.J. "Births to Unmarried Mothers: United States, 1980-1992." Vital and Health Statistics, Series 21, No. 53. U.S. Department of Health and Human Services, Public Health Service. 1995, Table 5; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Report of Final Natality Statistics, 1996." Monthly Vital Statistics Report 46 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, 1998, Table 17. Also previous issues of this annual report (Volume 45, no.11; Volume 44, no. 11; Volume 44, no. 3, Table 14 in each); Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." National Vital Statistics Reports 47(18). Hyattsville, Md.: National Center for Health Statistics, 1999, Table 17; unpublished data from S. Ventura, National Center for Health Statistics.

PF 2.3

CHILDREN LIVING IN FOSTER CARE[12]

A child is placed in foster care when a court determines that his or her family cannot provide a minimally safe environment. This determination often follows an investigation by a state or county child protective services worker. Placement most commonly occurs either because a member of a household has physically or sexually abused a child or because a child's caretaker(s) has severely neglected the child. In some cases, children with severe emotional disturbances may also be put into foster care.

Since both federal and state laws discourage removal of children from their families unless necessary to ensure a child's safety, placement in foster care is an extreme step taken only when a child is in immediate danger or when attempts to help the family provide a safe environment have failed; thus, the frequency of placements in foster care is an indicator of family dysfunction that is so severe that a child cannot remain safely with his or her family.

The number of children in foster care rose sharply from 262,000 in 1982 to 507,000 in 1996 (see Table PF 2.3). Estimates for 1997 indicate a further increase to 516,000. As shown in Figure PF 2.3, the rate of children living in foster care (i.e., the number of children in foster care per thousand children under age 18) also rose dramatically during the same time period, from 4.2 per thousand children under age 18 in 1982 to 7.3 per thousand in 1996, with preliminary data for 1997 showing an increase to 7.4 per thousand.

Table PF 2.3

Number and rate (per 1,000) of children in the United States living in foster care: 1982-1997

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Total number (in thousands)	262	269	276	276	280	300	340	383	400	414	427	445	468	483	507	516
Rate (per thousand)	4.2	4.3	4.3	4.3	4.5	4.8	5.4	6.0	6.2	6.4	6.5	6.6	6.9	7.1	7.3	7.4

Note: Estimate of total is the number of children in foster care on the last day of the fiscal year. 1996 is the last year in which data on foster care are collected through the Voluntary Cooperative Information System (VCIS). The Administration on Children and Families (ACF) has implemented the Adoption and Foster Care Analysis and Reporting System (AFCARS) as a replacement for VCIS. While VCIS was a voluntary reporting system, states are required to participate in AFCARS and must use uniform definitions. Most importantly, AFCARS collects case-level foster care data.

Note: Estimates in this table may not be comparable to estimates provided in previous issues of Trends in the Well-Being of America's Children and Youth due to changes in the population estimates provided by the U.S. Bureau of the Census.

Sources: Estimate of children in foster care for 1997 from special analysis by John Hargrove, Department of Health and Human Services, Administration for Children and Families, Children's Bureau, 1999; estimates of children in foster care for years 1982-1996 from Tatara, Tashio, VCIS Research Notes, No. 11, August 1995, and VCIS Research Notes, No. 13, March 1997. population estimates for 1982-1990 from U.S. Bureau of the Census, Statistical Abstract of the United States, 1996. Washington, D.C.: U.S. Government Printing Office. 1996; population estimates for 1990-1997 from http:www.census.gov/population/estimates/state/97agesex.txt.

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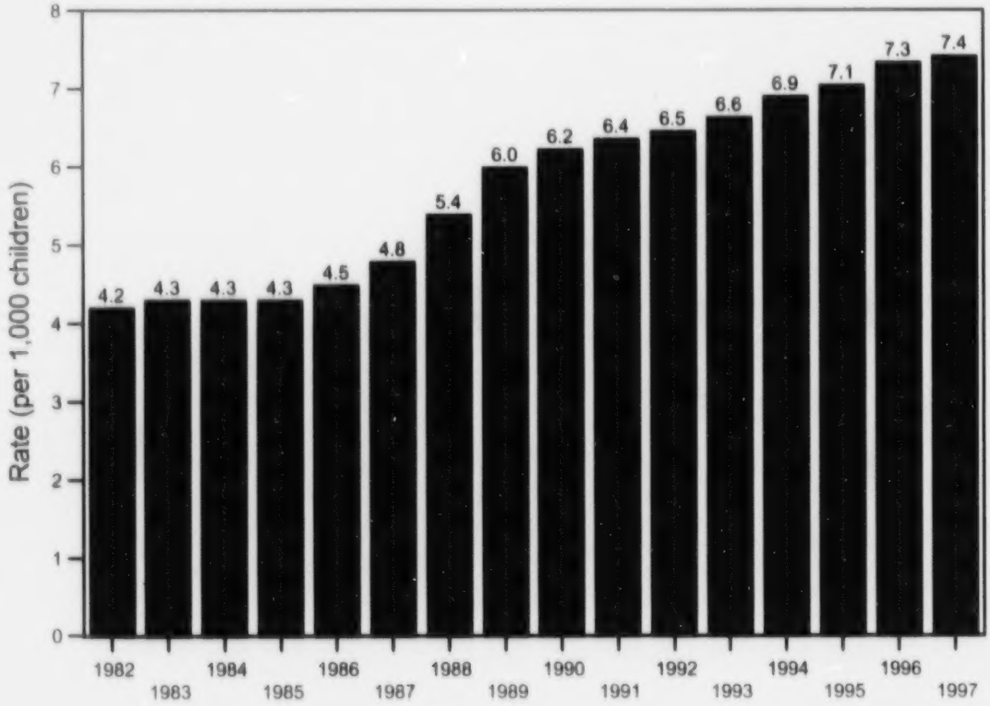
[12] For purposes of this report, "foster care" is defined as a living arrangement where a child resides outside his or her own home, under the case management and planning responsibility of a state child welfare agency. These living arrangements include relative and nonrelative foster homes, group homes, child-care facilities, emergency shelter care, supervised independent living, and nonfinalized adoptive homes.

Figure PF 2.3

Children in the United States living in foster care (rate per 1,000 children): 1982-1997



Note: Estimate of total is the number of children in foster care on the last day of the fiscal year. 1996 is the last year in which data on foster care are collected through the Voluntary Cooperative Information System (VCIS). The Administration on Children and Families (ACF) has implemented the Adoption and Foster Care Analysis and Reporting System (AFCARS) as a replacement for VCIS. While VCIS was a voluntary reporting system, states are required to participate in AFCARS and must use uniform definitions. Most importantly, AFCARS collects case-level foster care data.

Note: Estimates in this table may not be comparable to estimates provided in previous issues of Trends in the Well-Being of America's Children and Youth due to changes in the population estimates provided by the U.S. Bureau of the Census.

Sources: Estimate of children in foster care for 1997 from special analysis by John Hargrove, Department of Health and Human Services, Administration for Children and Families, Children's Bureau, 1999; estimates of children in foster care for years 1982-1996 from Tatara, Tashio, VCIS Research Notes, No. 11, August 1995, and VCIS Research Notes, No. 13, March 1997. Population estimates for 1982-1990 from U.S. Bureau of the Census, Statistical Abstract of the United States, 1996. Washington, D.C.: U.S. Government Printing Office. 1996; population estimates for 1990-1997 from http:www.census.gov/population/estimates/state/97agesex.txt.

PF 3.1

RESIDENTIAL STABILITY: PERCENTAGE OF CHILDREN UNDER AGE 18[13] WHO HAVE MOVED WITHIN THE LAST YEAR

Research has demonstrated a strong relationship between residential stability and child well-being, with frequent moves associated with such negative outcomes as dropping out of high school, delinquency, depression, and nonmarital teen births. Some researchers theorize that these negative associations may result from a lack of rootedness in a local community and its institutions on the part of frequent movers.[14]

The United States has long been a highly mobile society. In 1960, 21 percent of children under the age of 18 had moved to a new residence during the previous year. The general trend since that time has been toward somewhat lower rates of mobility, with a rate of 18 percent in 1997 (see Table PF 3.1.A).

Differences by Age. Young children were the most mobile of any child age group (see Table PF 3.1.B). In 1997, 24 percent of children between the ages of 1 and 4 had changed residences in the previous year, compared with 19 percent among children ages 5 through 9, 15 percent for ages 10 through 14, and 14 percent for youth ages 15 through 17.

Differences by Race and Hispanic Origin. For all children under age 18 in 1997, white children were the least mobile, with 17 percent moving during the previous year compared with 23 percent of black and Hispanic children.

Table PF 3.1.A

Percentage of children in the United States under age 18[a] who have moved within the last year: selected years, 1960-1997

	1960	1970	1981	1990	1991	1992	1993	1994	1996	1997
Total	21	19	18	18	17	18	17	17	18	18

[a] Estimates are based on children ages 1 and older at time of survey.

Sources: U.S. Bureau of the Census. "Geographical Mobility: March 1996 to March 1997". Current Population Reports, Series P-20, No. 510u. Washington, DC: Government Printing Office, 1998, Table 26; Also previous issues of this annual report (Series P-20, no. 497, no. 485, no. 481, no. 473, no. 463, no. 456, Table 26 in all; Series P-20, no. 377, Table 5; and Series P-20, no. 210, Table 3); U.S. Bureau of the Census. "Geographical Mobility: March 1959 to March 1960". Current Population Reports, Series P-20. Washington, DC: Government Printing Office, 1961, Table 4.

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[13] Estimates were based on children ages 1 and older at time of survey.

[14] Wood, D., Halfon, N., Scarlata, D., Newacheck, P., and Nessim, S. 1993. "Impact of Family Relocation on Children's Growth, Development, School Function, and Behavior." *Journal of the American Medical Association* 270: 1334-1338; Coleman, J. 1988. "Social Capital and the Creation of Human Capital." *American Journal of Sociology* 94: 95-120.

Table PF 3.1.B

Percentage of children in the United States under age 18[a] who have moved within the last year, by age and by race and Hispanic origin:[b] 1990-1997[c]

	1990	1991	1992	1993	1994	1996	1997
All children							
All ages	18	17	18	17	17	18	18
Ages 1-4	24	23	22	23	22	25	24
Ages 5-9	19	18	18	17	17	18	19
Ages 10-14	15	14	15	14	13	15	15
Ages 15-17	15	15	14	14	15	13	14
White children							
All ages	18	17	17	16	16	17	17
Ages 1-4	23	22	21	22	21	24	23
Ages 5-9	18	17	17	16	16	18	18
Ages 10-14	14	13	15	13	12	14	15
Ages 15-17	14	14	14	14	13	12	13
Black children							
All ages	21	21	21	20	20	22	23
Ages 1-4	26	26	27	26	25	29	29
Ages 5-9	22	22	22	20	22	22	26
Ages 10-14	19	17	18	17	16	18	18
Ages 15-17	18	16	16	14	18	14	17
Hispanic children							
All ages	25	21	24	23	21	23	23
Ages 1-4	32	27	27	28	26	31	28
Ages 5-9	28	20	25	24	20	23	21
Ages 10-14	18	19	21	19	15	18	22
Ages 15-17	21	19	19	20	21	19	17

[a] Estimates are based on children ages 1 and older at time of survey.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

[c] Estimates for 1995 are not available.

Sources: U.S. Bureau of the Census. "Geographical Mobility: March 1996 to March 1997". Current Population Reports, Series P-20, No. 510u. Washington, DC: Government Printing Office, 1998, Table 26; Also previous issues of this annual report (Series P-20, no. 497, no. 485, no. 481, no. 473, no. 463, no. 456, Table 26 in all).

PF 3.2

CHILDREN IN POOR AND VERY POOR NEIGHBORHOODS

Recent research has demonstrated a significant relationship between neighborhood quality and the well-being of the children and youth who live in them. Even after controlling for relevant personal and family background characteristics, residence in a low-income neighborhood has been shown to have negative effects on early childhood development and to be associated with higher rates of dropping out of high school and teen parenthood.[15]

Overall, in 1990, one in 20 American children lived in a very poor neighborhood—defined as a census tract in which 40 percent or more of the residents live in poor families.[16] More than one in five children lived in neighborhoods in which 20 percent or more of the residents lived in poor families (see Table PF 3.2).

Differences by Race and Hispanic Origin. Black children were the most likely to live in very poor neighborhoods, followed by Hispanic children and—at a much lower rate— white children. Almost 19 percent of black children lived in very poor neighborhoods, compared to 11.3 percent of Hispanic children and 1.2 percent of white children (see Figure PF 3.2).

Differences by Family Structure. Children in single-parent families were much more likely to live in a very poor neighborhood than were children in two-parent families (12.5 percent versus 2.7 percent) (see Figure PF 3.2).

Differences by Family Income. More than one in six poor children (17.5 percent) lived in very poor neighborhoods, compared with 2.3 percent of non-poor children.

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[15] Brooks-Gunn, J., Duncan, G., Klebanov, P., and Sealand, N. 1994. "Do Neighborhoods Influence Child and Adolescent Behavior?" *American Journal of Sociology* 99 (2): 353-395. See also Crane, J. 1991. "The Epidemic Theory of Ghettos and Neighborhood Effects on Dropping Out of High School and Teenage Childbearing." *American Journal of Sociology* 96 (5): 1126-1159.

[16] While trend data for children are not available, trends for the entire population show that between 1970 and 1990, the percent of all persons living in very poor neighborhoods increased from 3 percent to 4.5 percent, and the numbers nearly doubled from 4.1 million to 8 million. See Jargowsky, P.A. 1996. *Poverty and Place: Ghettos, Barrios, and the American City*, Table 2.1. New York: Russell Sage.

Table PF 3.2

Percentage of children in the United States who live in poor neighborhoods by age, family structure, family poverty status, race and Hispanic origin:[a] 1990

	Neighborhood Poverty Level	
	20+ Percent Poor	40+ Percent Poor
Total	22.9	5.0
Age of child		
Under age 5	23.5	5.3
Ages 5-17	22.7	4.9
Family structure		
Two-parent	17.3	2.7
Single-parent	41.2	12.5
Family poverty		
Poor	54.6	17.5
Nonpoor	16.0	2.3
Race and Hispanic origin		
White (non-Hispanic) and other	12.2	1.2
Black	56.4	18.6
Hispanic	46.6	11.3

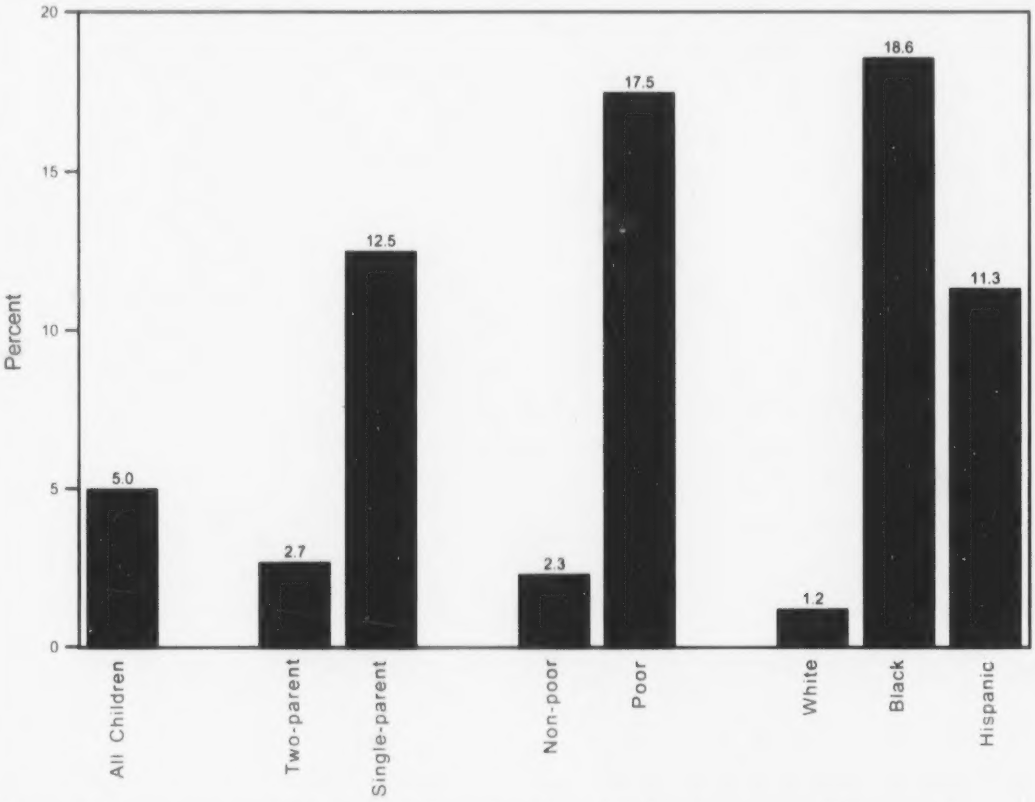
[a] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin. Estimates for whites also include all other persons not white, black, or Hispanic.

Note: Neighborhoods are defined as census tracts and block-numbering areas. Both metropolitan and nonmetropolitan areas are included. The poverty rate is the percentage of all persons in the neighborhood living in families below the federal poverty line in 1990.

Source: Tabulations by Paul A. Jargowski from 1990 Census Summary Tape File 3A (CD-ROM version).

Figure PF 3.2

Percentage of children in the United States who live in very poor (40+ percent poverty) neighborhoods, by family structure, family poverty status, and race and Hispanic origin:[a] 1990



[a]Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin. Estimates for whites also include all other persons not white, black, or Hispanic.

Note: Neighborhoods are defined as census tracts and block-numbering areas. Both metropolitan and nonmetropolitan areas are included. The poverty rate is the percentage of all persons in the neighborhood living in families below the poverty line in 1990.

Source: Tabulations by Paul A. Jargowski from 1990 Census Summary Tape File 3A (CD-ROM version).

Economic Security

(ES)

ES 1.1
MEDIAN FAMILY INCOME

Median income[1] of families with children is a good starting point for assessing the economic well-being of children since it measures the ability of a family at the midpoint of the income distribution to purchase food, shelter, clothing, child care, and other basic goods and services required to raise children.[2]

However, median family income fails to capture important economic resources that may also be available to a family, such as employer-paid health benefits, Medicaid, or Food Stamps; moreover, it says nothing about changes in the distribution of income across families. For a more complete picture of children's economic well-being, it is necessary to look at several measures of economic well-being, including those in the following sections.

Median Family Income of All Families with Children. Between 1975 and 1996, median income of all families with children (in constant 1997 dollars)[3] fluctuated in a narrow range—never falling below $40,208 and never rising above $42,143 (see Figure ES 1.1).[4] However, between 1996 and 1997, median income of all families with children increased by about 4 percent from $41,925 to $43,545, a statistically significant increase.[5]

Median Family Income by Family Type. Throughout the period from 1975 through 1997, median income of mother-only families has never exceeded 35 percent of median income of two-parent families (see Figure ES 1.1). In 1997, the median family income of mother-only families was $17,256, compared with $54,395 for married-couple families with children.

Between 1990 and 1997, median income of father-only families never exceeded 62 percent of median income of two-parent families (see Figure ES 1.1). In 1997, median income of father-only families was $28,668.

Although real median income of mother-only families was no higher in 1993 than in 1975, there has been a 15 percent increase in median income of mother-only families between 1993 and 1997. In contrast, median income of married-couple families has risen steadily throughout the 1975-1997 period.[6] Between 1975 and 1993, median income of married-couple families rose about 13 percent from $44,911 to $50,591. Between 1993 and 1997, their median income continued to rise to $54,395, an additional increase of over 7 percent.

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[1] Median income is the amount that divides the income distribution into two equal groups, half having incomes above the median, half having incomes below the median.

[2] When median family income is rising, the likelihood is that children in a typical family are enjoying a rising standard of living.

[3] In constructing income figures in constant 1997 dollars, we have followed the practice of the Bureau of the Census and used the CPI-U-X1 consumer price index. This index differs from the standard CPI-U index in its treatment of the costs of owner-occupied housing for years prior to 1986. After 1986, it is identical to the CPI-U.

[4] However, this apparent stagnation was in part the result of a shift in the living arrangements of families with children. As shown in Table PF 2.1.A, between 1970 and 1997 the percentage of children living in female-headed families increased from 11 percent to 24 percent. Since, as will be described in the next section, female-headed families have much lower incomes than two-parent families, this shift in living arrangements depressed the median income of all families with children.

[5] Tests of statistical significance were carried out using estimates of standard errors provided by the Bureau of the Census. See http://ferret.bls.census.gov/macro/031997/faminc/04_001.htm, and http://ferret.bls.census.gov/macro/031998/faminc/04_001.htm. In accordance with Census Bureau procedures, a .10 level of statistical significance is used.

[6] This is due in part to an increase in maternal employment. As shown in Table ES 3.2.A, between 1980 and 1997 the percentage of mothers who worked increased from 53 percent to 68 percent.

Differences in Median Family Income by Race and Hispanic Origin. Median family incomes are substantially higher for white families with children than for black and Hispanic families with children. In 1997, whites enjoyed median family incomes that were about 85 percent higher than those of black families and 79 percent higher than those of Hispanic families (see Table ES 1.1).

Much of the black-white difference and some of the Hispanic-white difference in median family income is due to the fact that black and Hispanic families are more likely than white families to be mother-only. As shown in Table PF 2.1.A, 52 percent of black children were being raised in mother-only families in 1997, compared with 27 percent of Hispanic children and only 18 percent of white children.[7]

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[7] Among female-headed families, the black-white difference in median family income was 25 percent, while among married-couple families the difference was 16 percent (see Table ES 1.1). Among female-headed families, the Hispanic-white difference in median family income was 46 percent, while among married-couple families the difference was 66 percent. Thus, over half of the Hispanic-white income difference remains even after taking into account differences in living arrangements (see Table ES 1.1).

Table ES 1.1

Median income of families in the United States with related children under age 18, by race and Hispanic origin[a] and family structure (in constant 1997 dollars):[b] selected years, 1975-1997

	1975	1980	1985[c]	1990	1991	1992[d]	1993	1994	1995	1996	1997
All families	$40,671	$41,666	$41,326	$42,035	$41,233	$40,649	$40,208	$41,073	$42,143	$41,925	$43,545
White	—	—	—	$44,823	$44,426	$44,575	$44,248	$44,602	$45,381	$45,549	$46,770
Black	—	—	—	$23,773	$22,180	$21,228	$20,738	$23,189	$23,876	$23,438	$25,236
Hispanic	—	—	—	$27,020	$26,001	$25,931	$24,566	$24,958	$24,293	$25,184	$26,120
Married-couple families	$44,911	$47,402	$48,253	$50,667	$50,099	$50,554	$50,591	$51,165	$52,625	$52,956	$54,395
White	—	—	—	$51,189	$50,882	$51,811	$51,512	$52,278	$53,283	$53,554	$55,232
Black	—	—	—	$43,866	$41,666	$41,591	$40,718	$45,578	$46,282	$43,677	$47,631
Hispanic	—	—	—	$33,739	$32,166	$32,465	$31,655	$31,878	$31,250	$32,337	$33,233
Mother-only families	$15,664	$16,506	$15,030	$16,077	$15,334	$15,178	$14,964	$16,139	$17,098	$16,765	$17,256
White	—	—	—	$18,258	$18,281	$17,960	$17,794	$18,123	$19,061	$18,555	$18,939
Black	—	—	—	$12,656	$11,092	$11,889	$11,524	$12,903	$13,679	$13,960	$15,111
Hispanic	—	—	—	$12,454	$12,039	$12,897	$11,660	$12,057	$12,433	$11,499	$12,983
Father-only families	—	—	—	$30,959	$28,483	$25,416	$24,823	$26,092	$28,425	$27,109	$28,668
White	—	—	—	$32,134	$28,879	$27,637	$29,206	$28,204	$29,684	$28,329	$30,201
Black	—	—	—	$25,254	$24,652	$20,557	$20,945	$20,695	$23,500	$22,737	$21,815
Hispanic	—	—	—	$25,512	$22,604	$17,768	$19,810	$18,791	$20,541	$23,070	$20,028

[a] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

[b] Income statistics converted to constant 1997 dollars using the CPI-U-X1 (all items) price index. CPI-U-X1 is a rental equivalence approach to homeowners' costs for the consumer price index prior to 1983, the first year for which the official index (CPI-U) incorporates such a measure.

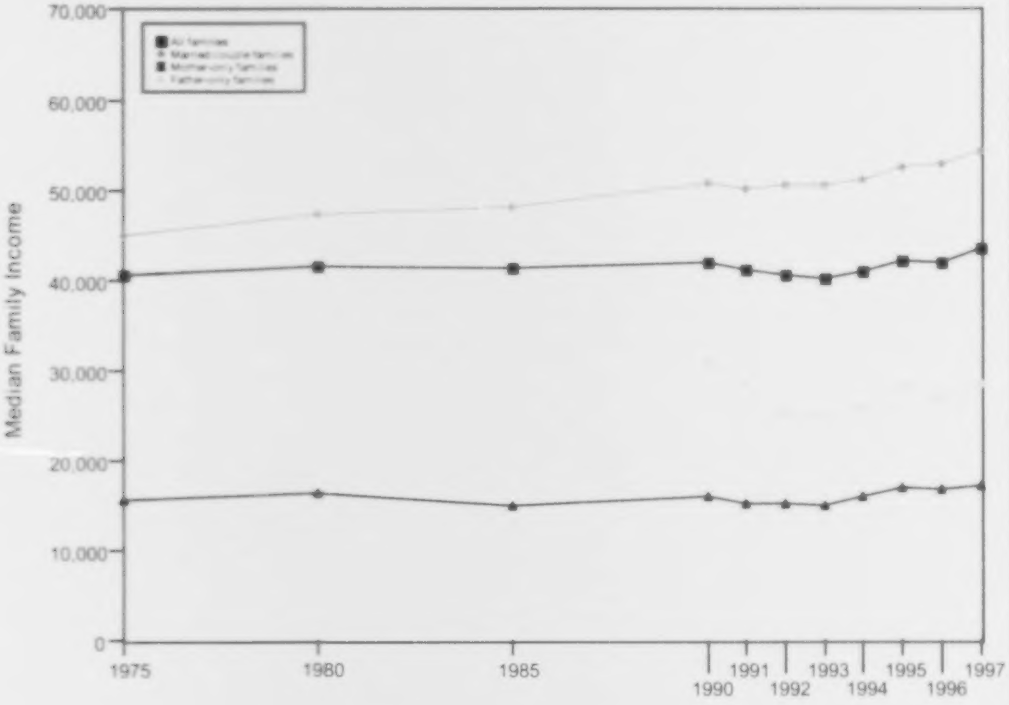
[c] Recording of amounts for earnings from longest job increased to $299,999.

[d] Implementation of 1990 census population controls.

Sources: Unpublished tabulations of the March Current Population Survey supplied by U.S. Bureau of the Census; U.S. Bureau of the Census, Current Population Survey, Annual Demographic Survey: March Supplement, Table FINC-04 available online at http://ferret.bls.census.gov/macro/031998/faminc/04_000.htm, 1/20/99; Council of Economic Advisors, 1997. Economic Report of the President, 1997, Table B-58; U.S. Bureau of the Census, 1998. Current Population Reports, Money Income in the United States: 1997 (With Separate Data on Valuation of Noncash Benefits), P60-200. Washington, D.C.: U.S. Government Printing Office, Table B-1.

Figure ES 1.1

Median income of families in the United States with related children under age 18, by family structure (in constant 1997 dollars):[a] selected years, 1975-1997



[a] Income statistics converted to constant 1997 dollars using the CPI-U-X1 (all items) price index. CPI-U-X1 is a rental equivalence approach to homeowners' costs for the consumer price index prior to 1983, the first year for which the official index (CPI-U) incorporates such a measure.

Sources: Unpublished tabulations of the March Current Population Survey supplied by U.S. Bureau of the Census; U.S. Bureau of the Census, Current Population Survey, Annual Demographic Survey: March Supplement, Table FINC-04 available online at http://ferret.bls.census.gov/macro/031998/faminc/04_000.htm, 1/20/99; Council of Economic Advisors, 1997. Economic Report of the President, 1997, Table B-58. U.S. Bureau of the Census, 1998. Current Population Reports, Money Income in the United States: 1997 (With Separate Data on Valuation of Noncash Benefits), P60-200. Washington, D.C.: U.S. Government Printing Office, Table B-1.

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ES 1.2

THE INCOME DISTRIBUTION: THE INCOME-TO-POVERTY RATIO OF FAMILIES WITH CHILDREN, BY INCOME QUINTILE

Figures ES 1.2.A and ES 1.2.B present trends in the income of the poorest and richest families with children. The poorest families are those whose income falls in the bottom 20 percent (or bottom quintile) of all families; the richest families are those whose income falls in the top 20 percent of all families. The measure shown is the income-to-poverty ratio, the ratio of annual family income to the poverty line. For example, families whose pretax income was half of the poverty line would have a value of 0.50 for this measure. Each figure shows results separately by type of family.

Between 1967 and 1973, the income-to-poverty ratio of the poorest families increased from 0.74 to 0.88 (see Figure ES 1.2.A). By 1994, the ratio had dropped to 0.66.

Differences in the Income-to-Poverty Ratio by Family Type. The poorest single-mother families fared much worse than the poorest married-couple families (see Figure ES 1.2.A). After an increase from 0.21 to 0.33 between 1967 and 1973, the ratio for the poorest single-mother families dropped and was at 0.25 in 1994. The poorest married-couple families crossed over the poverty line between 1967 and 1973 (from 0.89 to 1.16; see Figure ES 1.2.A); however, since 1979, their ratio has declined, reaching 1.06 by 1994.

Difference in the Income-to-Poverty Ratio by Income Quintile. While the poorest families with children were getting poorer, the richest families with children were getting richer (see Figure ES 1.2.B). Between 1967 and 1994, the income-to-poverty ratio of the richest families increased from 4.77 to 7.14.

For the richest married-couple families, the picture was even brighter (see Figure ES 1.2.B). The income-to-poverty ratio increased from 4.88 to 7.68 between 1967 and 1994. The richest single-parent families headed by women were also well above the poverty line throughout the entire period. Their income-to-poverty ratio increased from 2.78 to 4.14 between 1967 and 1989 before declining to 4.02 in 1994.

Data for all five income quintiles show that the poorest families (the lowest quintile) were the only families to lose ground between 1967 and 1994 (see Table ES 1.2). For all time periods and all income groups, families headed by single mothers had considerably less income than those headed by married couples.

Table ES 1.2

The income-to-poverty ratio. Average pretax income as a multiple of poverty[a] among families in the United States with children under age 18,[b] by family structure and income quintile: 1967, 1973, 1979, 1989, 1992, and 1994

Family type and income quintile	1967	1973	1979	1989	1992	1994
All families with children						
Lowest quintile	0.74	0.88	0.84	0.74	0.65	0.66
Second quintile	1.54	1.88	1.95	1.87	1.72	1.73
Middle quintile	2.13	2.65	2.84	2.93	2.77	2.79
Fourth quintile	2.84	3.54	3.85	4.14	4.00	4.09
Highest quintile	4.77	5.73	6.15	7.20	6.86	7.14
Total	2.40	2.94	3.13	3.38	3.20	3.28
Married couples with children						
Lowest quintile	0.89	1.16	1.18	1.14	1.07	1.06
Second quintile	1.66	2.12	2.29	2.34	2.25	2.26
Middle quintile	2.23	2.84	3.12	3.34	3.26	3.31
Fourth quintile	2.93	3.71	4.11	4.52	4.43	4.58
Highest quintile	4.88	5.94	6.41	7.67	7.36	7.68
Total	2.52	3.15	3.42	3.80	3.67	3.78
Single mothers with children						
Lowest quintile	0.21	0.33	0.32	0.25	0.23	0.25
Second quintile	0.59	0.71	0.75	0.64	0.58	0.62
Middle quintile	0.91	1.03	1.22	1.14	1.06	1.11
Fourth quintile	1.45	1.67	2.01	2.03	1.89	1.94
Highest quintile	2.78	3.29	3.65	4.14	3.81	4.02
Total	1.19	1.41	1.59	1.64	1.51	1.59

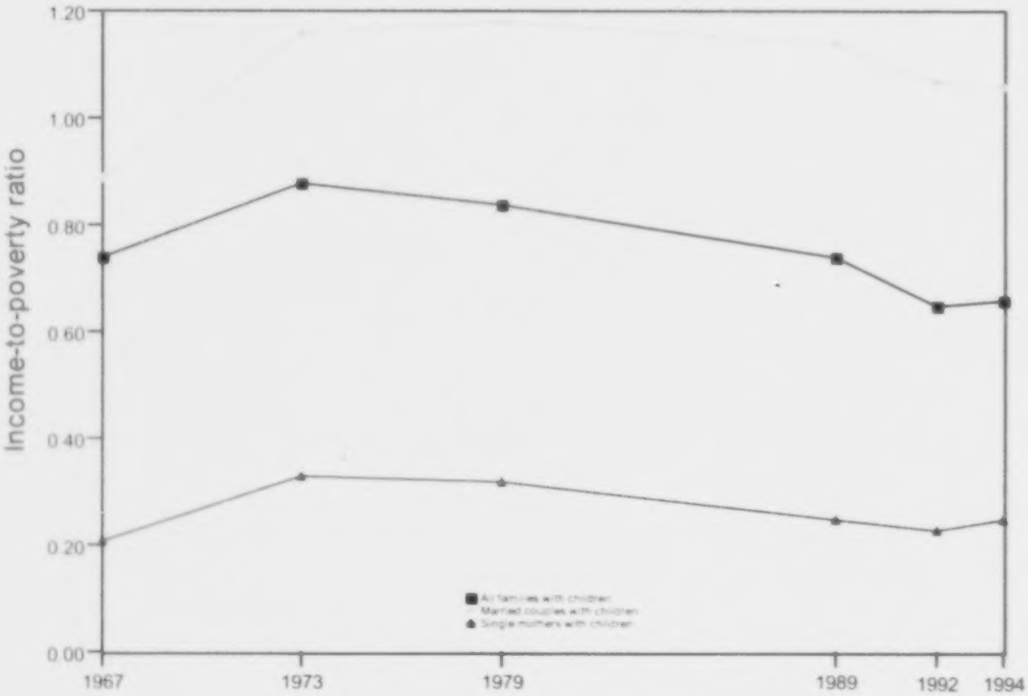
[a] Poverty thresholds are based on the 1989 distribution of family sizes, with no adjustment for the age of the head of household or the number of children. Quintiles are based on the number of persons.

[b] Weighted by persons.

Sources: U.S. Congress, House Ways and Means Committee, 1994 (Table H-21) and 1996 (Table H-16) Green Book.

Figure ES 1.2.A

Income-to-poverty[a] ratio for families in the United States with children under age 18, lowest income quintile, by family structure: selected years, 1967-1994

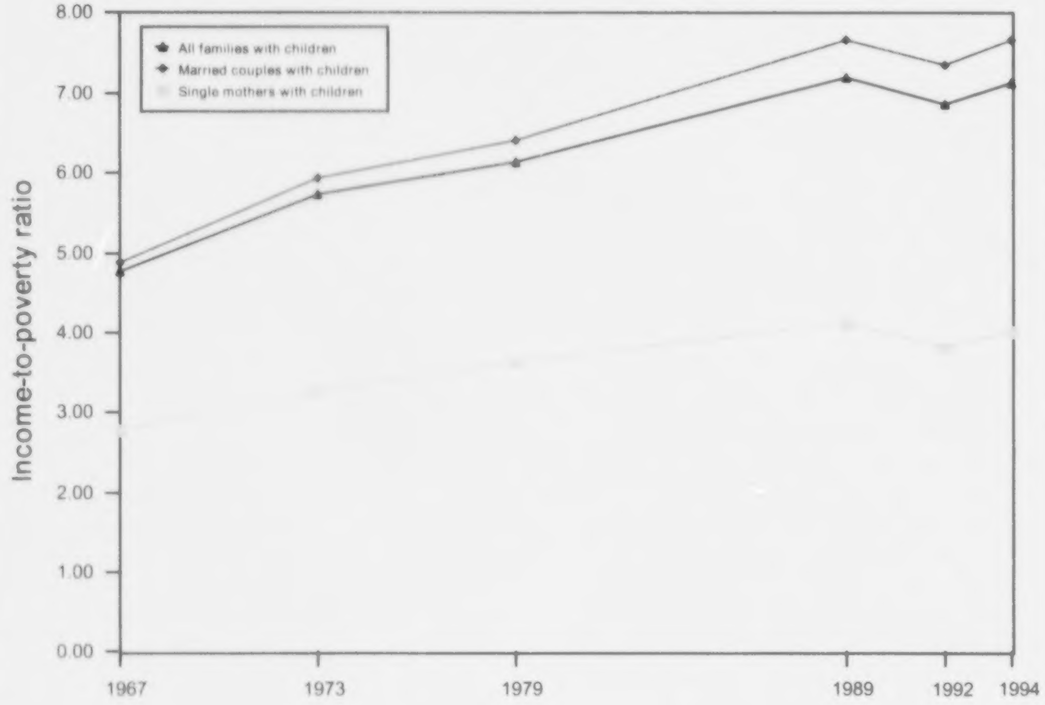


[a] Poverty thresholds are based on the 1989 distribution of family sizes, with no adjustment for the age of the head of household or the number of children. Quintiles are based on the number of persons.

Sources: U.S. Congress, House Ways and Means Committee, 1994 (Table H-21) and 1996 (Table H-16) Green Book.

Figure ES 1.2.B

Income-to-poverty[a] ratio for families in the United States with children under age 18, highest income quintile, by family structure: selected years, 1967-1994



[a] Poverty thresholds are based on the 1989 distribution of family sizes, with no adjustment for the age of the head of household or the number of children. Quintiles are based on the number of persons.

Sources: U.S. Congress, House Ways and Means Committee, 1994 (Table H-21) and 1996 (Table H-16) Green Book.

ES 1.3
CHILDREN IN POVERTY

Being raised in economically deprived circumstances can have far-reaching negative consequences for children. Growing up at or near the poverty line ($16,276 for a family of four in 1997) means not only that a child has a much lower level of consumption than other children but also that he or she is more likely than a non-poor child to experience difficulties in school,[8] to become a teen parent,[9] and, as an adult, to earn less and experience greater unemployment.[10] The effects of being raised in a family with income significantly below the poverty line are correspondingly more damaging.[11]

Children at, below, and Slightly above the Poverty Level. Figures ES 1.3.A and ES 1.3.B illustrate trends in the proportions of children living in various degrees of poverty and near-poverty.

- *Children in families with incomes below 50 percent of the poverty line.* Between 1975 and 1993, the proportion of children living in extreme poverty, that is, at or below 50 percent of the poverty line,[12] doubled from 5 percent in 1975 to 10 percent by 1993. By 1997, this percentage had dropped back to 8 percent (see Figure ES 1.3.A).
- *Children in families with incomes at or below the poverty line.* Less dramatic but still striking, the proportion of children at or below 100 percent of the poverty line increased by 31 percent[13] from 17 percent in 1975 to 22 percent by 1993 before dropping to 19 percent in 1997 (see Figure ES 1.3.A).
- *Children above but near the poverty line.* In contrast, the proportion of children living at or below 150 percent of the poverty line was about the same in 1997 (30 percent) as it was in 1975. As shown in the upper line of Figure ES 1.3.B, the proportion of children living at or below 200 percent of the poverty line in 1997 was 41 percent, compared with 43 percent in 1975.

Differences by Race and Hispanic Origin. The proportion of black and Hispanic children at or below 100 percent of the poverty line dropped significantly between 1996 and 1997 (from 40 percent to 37 percent for black children and from 40 percent to 36 percent for Hispanic children). In contrast, the proportion of white children dropped only slightly from 16 percent to 15 percent.[14] There was also a significant drop between 1996 and 1997 in the proportion of black and Hispanic children living at or below 200 percent of the poverty line (from 68 percent to 64 percent for black children and from 72 percent to 69 percent for Hispanic children) (see Table ES 1.3.A). However, the proportion of Hispanic children living in extreme poverty (at or below 50 percent of the poverty line) *increased* significantly between 1996 and 1997 from 14 percent to 16 percent.

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[8] Parker, S., Greer, S., and Zuckerman, B. 1988. "Double Jeopardy: The Impact of Poverty on Early Childhood Development." *Pediatric Clinics of North America* 35: 1-10.

[9] An, C., Haveman, R., and Wolfe, B. 1993. "Teen Out-of-Wedlock Births and Welfare Receipt: The Role of Childhood Events and Economic Circumstances." *Review of Economics and Statistics* 75: 195-208.

[10] Duncan, G., and Brooks-Gunn, J. 1997. "Income Effects across the Life Span: Integration and Interpretation." In *The Consequences of Growing Up Poor* (G. Duncan and J. Brooks-Gunn, eds.). New York: Russell Sage Press.

[11] For example, the effects of family poverty on measures of cognitive ability "varied dramatically depending upon whether a family was very poor (family income below 50 percent of the poverty level), poor, or near poor" (Smith, J.R., Brooks-Gunn, J., and Klebanov, P.K. 1997. "Consequences of Living in Poverty for Young Children's Cognitive and Verbal Ability and Early School Achievement." In *The Consequences of Growing Up Poor* (G. Duncan and J. Brooks-Gunn, eds.). New York: Russell Sage Press.

[12] Fifty percent of the poverty line was $8,138 in 1997.

[13] Percentage change calculated using unrounded numbers.

[14] This change, although small, is statistically significant.

A more detailed (but less current) look at poverty by race and Hispanic origin, using data from the Decennial Census,[15] shows that the incidence of poverty is lowest by far for white children and highest for black and Native American children (see Table ES 1.3.B and Figure ES 1.3.C). While the incidence of poverty grew noticeably between 1979 and 1989 for all groups, the differences between the groups remained stable:

- The poverty rate for white children was 12 percent in 1989.
- The poverty rate for Asian children was 17 percent in 1989, more than a third higher than for white children.
- The poverty rate for Hispanic children was 32 percent in 1989, a rate 2.6 times as high as for white children.
- The poverty rate for American Indian and Alaska Native children was 38 percent in 1989, slightly more than three times the poverty rate for white children.
- The poverty rate for black children was 40 percent in 1989, slightly more than three times the poverty rate for white children.

Although statistics on Hispanics commonly group all Hispanics together, the incidence of poverty for Hispanic children varies substantially by their place of origin. The three most common places of origin for Hispanics are Mexico, Puerto Rico, and Cuba.

According to data for 1992 from a third source (the Panel Study of Income Dynamics),[16] children of Cuban descent were substantially less likely than other Hispanic children to experience either poverty (16 percent for Cubans compared with 31 percent for all Hispanic children) or extreme poverty (6 percent for Cubans compared with 12 percent for all Hispanic children); however, children of Puerto Rican descent were substantially *more* likely than other Hispanic children to experience poverty (45 percent) or extreme poverty (17 percent).

Differences by Family Structure. The chances of a child experiencing poverty are strongly influenced by the type of family in which he or she lives. Throughout the period from 1970 through 1997, about half of the children living in female-headed families were poor (see Table ES 1.3.C). In contrast, during the 1990s,[17] only about 10 percent of children living in married-couple families were poor (see Figure ES 1.3.D).

[15] Poverty estimates presented in Table ES 1.3.B are based on the Decennial Census rather than the Current Population Survey, which is used in Table ES 1.3.A and many other tables in this section. Estimates from the two sources differ because the Current Population Survey has a much smaller sample than the Decennial Census.

[16] The Panel Study of Income Dynamics excludes children who migrated to the United States after 1990. Consequently, it understates recent migrants' share of the Hispanic population. This is likely to lead to a lower estimate of child poverty than a more representative survey such as the Current Population Survey, which was used for Table ES 1.3.A.

[17] Statistics on children in married-couple families began to be published in 1990.

Table ES 1.3.A

Percentage of children in the United States under age 18 living below selected poverty[a] thresholds, by age and by race and Hispanic origin:[b] selected years, 1975-1997

	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Under 50% of poverty											
Related children under age 18	5	7	8	8	9	10	10	9	8	8	8
White	4	5	6	6	6	6	6	6	6	6	6
Black	14	17	21	22	25	27	26	23	20	20	19
Hispanic	—	—	—	14	14	15	14	17	16	14	16
Under 100% of poverty											
Related children under age 18	17	18	20	20	21	22	22	21	20	20	19
White	12	13	16	15	16	16	17	16	16	16	15
Black	41	42	43	44	46	46	46	43	41	40	37
Hispanic	33	33	40	38	40	39	40	41	39	40	36
Under 150% of poverty											
Related children under age 18	30	29	32	31	32	33	33	32	32	31	30
White	24	24	26	25	26	27	27	27	26	26	26
Black	60	57	59	57	60	60	61	58	56	56	51
Hispanic	—	—	—	55	58	58	59	58	59	57	56
Under 200% of poverty											
Related children under age 18	43	42	43	42	43	44	44	43	43	43	41
White	38	37	38	37	38	38	38	38	37	37	36
Black	73	70	71	68	70	71	72	68	68	68	64
Hispanic	—	—	—	69	71	70	72	72	72	72	69

[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. The levels shown here are derived from the ratio of the family's income to the family's poverty threshold. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Sources: Percentages were calculated by Child Trends based on data from the U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 106, Table 7; No. 133, Table 7; No. 158, Table 4; No. 175, Table 6; No. 181, Table 6; No. 185, Revised Table 6; No. 188, Table 8; No. 189, Table 9; No. 194, Table 2; No. 198, Table 2; and No. 201, Tables 2, A-1, and C-2.

Table ES 1.3.B

Percentage of children in the United States under age 18 living below the poverty level,[a] by race and Hispanic origin:[b] 1979 and 1989

	1979	1989
All children under age 18	16	18
White	11	12
Black	38	40
Hispanic	29	32
Asian	15	17
American Indian/Alaska Native	33	38

[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. The levels shown here are derived from the ratio of the family's income to the family's poverty threshold. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, 1980 Census of the Population, "Detailed Population Characteristics," PC-80-1-D1-A, United States Summary, Table 304; U.S. Bureau of the Census, 1990 Census of the Population, "Social and Economic Characteristics," CP-2-1, United States Summary, Table 49.

Table ES 1.3.C (Part 1)

Percentage of children in the United States under age 18 living below the poverty level,[a] by family structure, age, and race and Hispanic origin:[b] selected years, 1960-1997

	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
All types of families with related children under age 18	26	21	15	17	18	20	20	21	22	22	21	20	20	19
White	20	14	10	12	13	16	15	16	16	17	16	16	16	15
Black	—	—	42	41	42	43	44	46	46	46	43	41	40	37
Hispanic	—	—	—	33	33	40	38	40	39	40	41	39	40	36
Asian	—	—	—	—	—	—	17	17	16	18	18	19	19	20
Related children under age 6	—	—	17	18	20	23	23	24	26	26	25	24	23	22
White	—	—	12	14	16	18	18	19	20	20	19	18	18	18
Black	—	—	42	41	45	47	50	51	53	52	49	49	45	40
Hispanic	—	—	—	—	34	41	40	44	43	43	44	42	42	38
Related children ages 6-17	—	—	14	16	17	19	18	19	19	20	19	18	18	18
White	—	—	10	12	12	14	14	15	15	15	15	14	14	14
Black	—	—	41	42	40	41	41	42	43	43	40	37	37	35
Hispanic	—	—	—	—	32	39	36	37	37	38	39	37	38	35
Married-couple families with related children under age 18	—	—	—	—	—	—	10	11	11	12	11	10	10	9
White	—	—	—	—	—	—	9	10	10	11	10	9	9	9
Black	—	—	—	—	—	—	18	15	18	18	15	13	14	13
Hispanic	—	—	—	—	—	—	26	29	29	30	30	28	29	26
Asian	—	—	—	—	—	—	—	—	—	16	—	15	15	—
Related children under age 6	—	—	—	—	—	—	12	12	13	13	12	11	12	11
White	—	—	—	—	—	—	11	11	12	13	11	11	11	10
Black	—	—	—	—	—	—	20	17	22	20	15	14	14	13
Hispanic	—	—	—	—	—	—	28	33	32	33	33	31	32	28

[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

[b] Persons of Hispanic origin may be of any race. Estimates for whites, blacks, and Asians include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 81, Table 4; No. 86, Table 1; No. 106, Table 11; No. 133, Table 11; No. 158, Table 7; No. 175, Table 6; No. 181, Table 5; No. 185, Revised Table 6; No. 188, Table 8; No. 189, Table 9; No. 194, Table 2; No. 198, Table 2; and No. 201, Tables 2, A-1, and C-2; U.S. Bureau of the Census, Current Population Reports, The Asian and Pacific Islander Population in the United States (Update), Series PPL, No. 32, Table 8; No. 77, Table 5; and No. 81, Table 5.

Table ES 1.3.C (Part 2)

Percentage of children in the United States under age 18 living below the poverty level,[a] by family structure, age, and race and Hispanic origin:[b] selected years, 1960-1997

	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Married couple families with related children ages 6-17	—	—	—	—	—	—	9	10	10	11	10	9	9	9
White	—	—	—	—	—	—	8	9	9	10	9	9	8	8
Black	—	—	—	—	—	—	17	14	16	17	14	12	14	13
Hispanic	—	—	—	—	—	—	25	26	26	28	28	27	28	25
Female-headed families with related children under age 18	68	64	59	53	51	54	53	55	55	54	53	50	49	49
White	60	53	43	44	42	45	46	47	46	46	46	42	43	44
Black	—	—	68	66	65	67	65	68	67	66	63	62	58	55
Hispanic	—	—	—	—	65	72	68	69	66	66	68	66	67	63
Related children under age 6	—	—	64	62	65	66	66	66	66	64	64	62	59	59
White	—	—	59	58	60	59	60	60	61	58	59	55	54	57
Black	—	—	71	67	72	75	73	74	73	72	70	71	64	61
Hispanic	—	—	—	—	70	78	77	74	72	72	74	72	72	68
Related children ages 6-17	—	—	49	49	46	48	47	50	49	48	47	45	45	45
White	—	—	38	40	36	40	39	41	39	40	40	37	38	39
Black	—	—	66	66	62	63	60	65	63	62	59	56	55	53
Hispanic	—	—	—	—	62	70	64	65	62	63	65	62	65	60

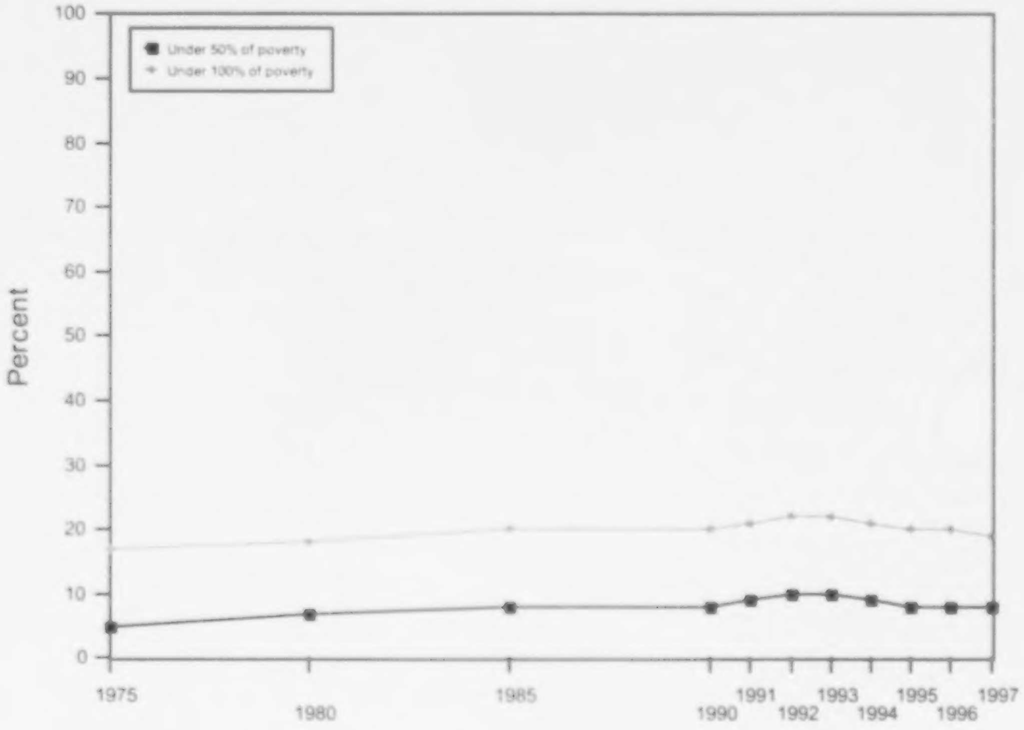
[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

[b] Persons of Hispanic origin may be of any race. Estimates for whites, blacks, and Asians include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 81, Table 4; No. 86, Table 1; No. 106, Table 11; No. 133, Table 11; No. 158, Table 7; No. 175, Table 6; No. 181, Table 5; No. 185, Revised Table 6; No. 188, Table 8; No. 189, Table 9; No. 194, Table 2; No. 198, Table 2; and No. 201, Tables 2, A-1, and C-2; U.S. Bureau of the Census, Current Population Reports, The Asian and Pacific Islander Population in the United States (Update), Series PPL, No. 32, Table 8; No. 77, Table 5; and No. 81, Table 5.

Figure ES 1.3.A

Percentage of children in the United States under age 18 in families living below 50 percent and 100 percent of poverty:[a] selected years, 1975-1997

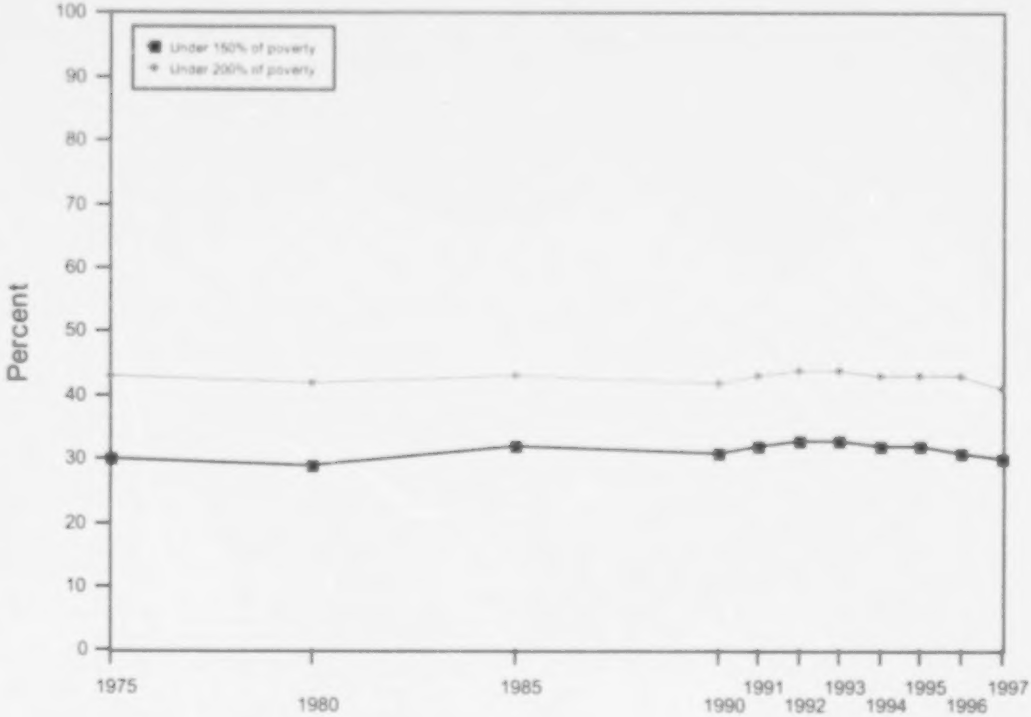


[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. The levels shown here are derived from the ratio of the family's income to the family's poverty threshold. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

Sources: Percentages were calculated by Child Trends based on data from the U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 106, Table 7; No. 133, Table 7; No. 158, Table 4; No. 175, Table 6; No. 181, Table 6; No. 185, Revised Table 6; No. 188, Table 8; No. 189, Table 9; No. 194, Table 2; No. 198, Table 2; and No. 201, Tables 2 and A-1.

Figure ES 1.3.B

Percentage of children in the United States under age 18 in households in families living below 150 percent and 200 percent of poverty:[a] selected years, 1975-1997

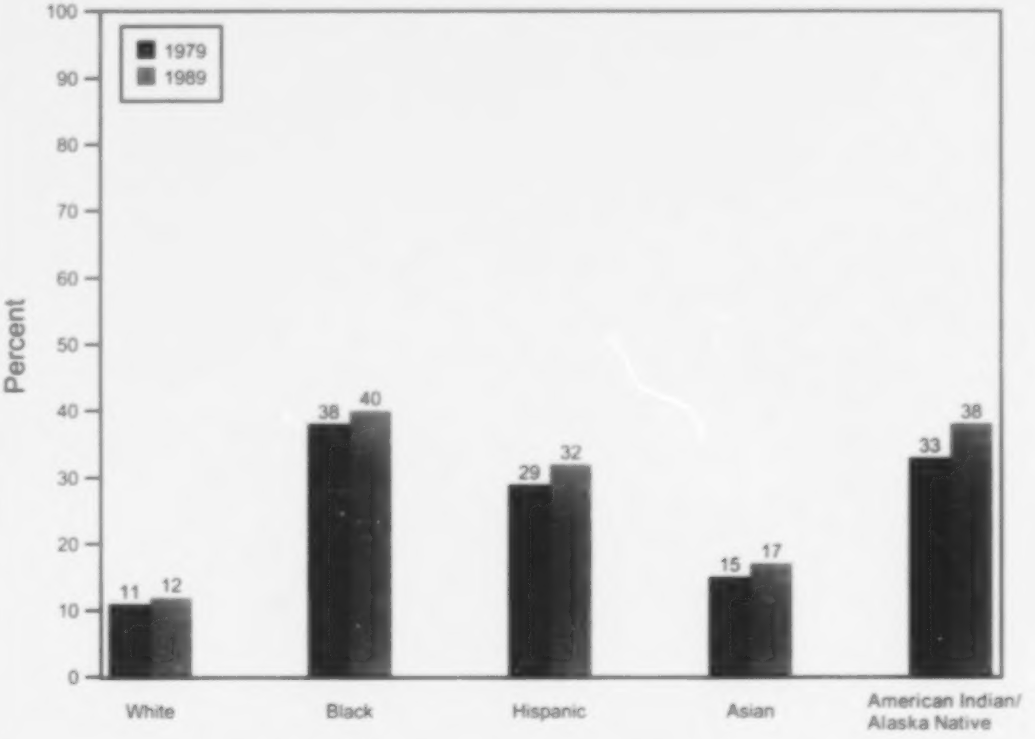


[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. The levels shown here are derived from the ratio of the family's income to the family's poverty threshold. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

Sources: Percentages were calculated by Child Trends based on data from the U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 106, Table 7; No. 133, Table 7; No. 158, Table 4; No. 175, Table 6; No. 181, Table 6; No. 185, Revised Table 6; No. 188, Table 8; No. 189, Table 9; No. 194, Table 2; No. 198, Table 2; and No. 201, Tables 2 and A-1.

Figure ES 1.3.C

Percentage of children in the United States under age 18 living below the poverty level,[a] by race/ethnicity:[b] 1979 and 1989



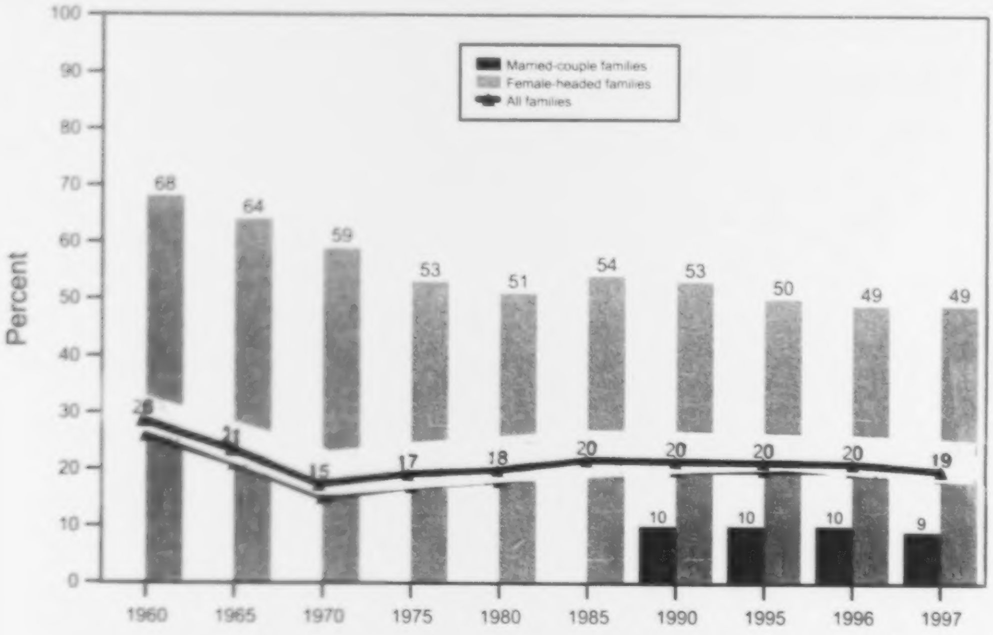
[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

[b] Persons of Hispanic origin may be of any race. Estimates for all races include persons of Hispanic origin.

Sources: U.S. Bureau of the Census, 1980 Census of the Population, "Detailed Population Characteristics," PC-80-1-D1-A, United States Summary, Table 304; U.S. Bureau of the Census, 1990 Census of the Population, "Social and Economic Characteristics," CP-2-1, United States Summary, Table 49.

Figure ES 1.3.D

Percentage of children in the United States under age 18 living below the poverty level,[a] by family type: selected years, 1960-1997



[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 81, Table 4; No. 86, Table 1; No. 106, Table 11; No. 133, Table 11; No. 158, Table 7; No. 175, Table 6; No. 181, Table 5; No. 185, Revised Table 6; No. 188, Table 8; No. 189, Table 9; No. 194, Table 2; No. 198, Table 2; and No. 201, Tables 2, A-1, and C-2.

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ES 1.4
LONG-TERM CHILDHOOD POVERTY

The statistics and discussion presented in ES 1.3 provide a "snapshot" of children in poverty in a single year; however, the effects of poverty on children are cumulative. Experiencing poverty year after year is more harmful to children than experiencing poverty occasionally.[18] The majority of children never experience poverty while growing up, and, among those who do, most are in poverty for only a small portion of their childhood. Many children, however, and particularly many black children, spend a large proportion of their formative years living in poverty, with correspondingly negative consequences for their development and well-being.

In this section, we focus on two cohorts of children.[19] The first cohort was age 0-5 in 1972; the second was age 0-5 in 1982. In each case, we look at the next ten years of the children's lives[20] and calculate how many years of those ten years were spent in poverty.

Changes in Childhood Poverty over Time. Although 76 percent of all children who were under age 6 in 1972 were never poor over the next ten years, 11 percent were poor for three or more of those years, 6 percent were poor for six or more years, and 3 percent were poor for at least nine years (see Table ES 1.4 and Figure ES 1.4). The pattern is similar a decade later. Of children who were under age 6 in 1982, 73 percent were never poor over the next ten years, 15 percent were poor for three or more of those years, 7 percent were poor for six or more years, and 4 percent were poor for at least nine years.

Differences by Race. The risk of experiencing long-term poverty in childhood varies substantially by race (see Table ES 1.4). Of the nonblack children who were under age 6 in 1982, 79 percent never experienced poverty over the next ten years, 9 percent were poor for three or more of those years, 3 percent were poor for six or more years, and only 1 percent were poor for at least nine years. By contrast, 43 percent of all black children who were under age 6 in 1982 experienced poverty for at least three of those years, 28 percent were poor for six or more years, and 17 percent were poor for at least nine years.

Moreover, for black children the risk of experiencing long-term poverty in childhood changed between the 1970s and the 1980s. Of the black children who were under age 6 in 1972, 34 percent never experienced poverty over the next ten years. For black children who were under age 6 in 1982, 41 percent never experienced poverty over the next ten years. Thus, there was a significant increase between the 1970s and the 1980s in the percentage of black children avoiding poverty for ten consecutive years.

However, the risk for black children of experiencing poverty at least nine out of ten years also increased between the 1970s and the 1980s. Of the black children who were under age 6 in 1972, 13 percent experienced poverty in at least nine of the next ten years. For black children who were under age 6 in 1982, 17 percent experienced poverty in at least 9 of the next 10 years.

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[18] Duncan, G. and Brooks-Gunn, J. (eds.). 1997. *The Consequences of Growing Up Poor.* New York: Russell Sage Press.

[19] Focusing on two cohorts ten years apart allows us to determine if long-term exposure to poverty has changed.

[20] This is different from the "Lifetime Childhood Poverty" concept, which was analyzed in the previous edition of this report. In the previous edition, we measured the number of years in poverty out of all 18 years of childhood.

Table ES 1.4

Percentage of children in the United States living in poverty over 10-year period,[a] by number of years in poverty[b] and by race: 1972-1981 and 1982-1991

	Number of Years in Poverty				
Decade	Never	One or more years	Three or more years	Six or more years	Nine or more years
1972-1981					
All children under age 6 in 1972	76	24	11	6	3
Black	34	66	44	24	13
Nonblack	82	18	6	3	1
1982-1991					
All children under age 6 in 1982	73	27	15	7	4
Black	41	59	43	28	17
Nonblack	79	21	9	3	1

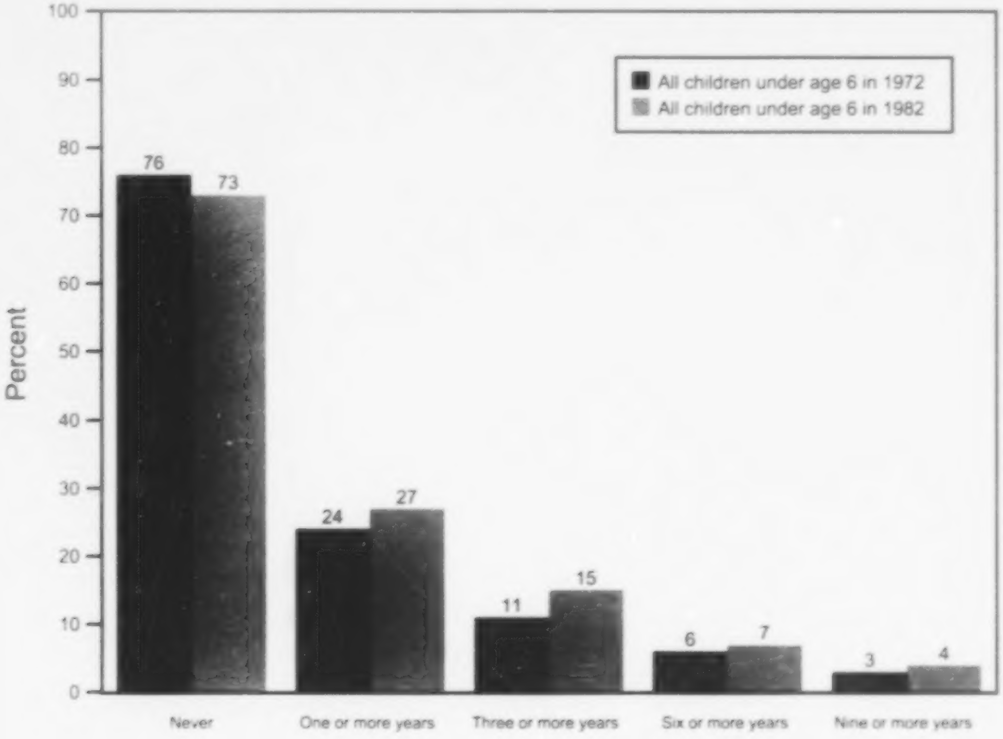
[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, adoption or cohabitation.

[b] Poverty status for all children who were under age 6 in 1972 was monitored for the decade beginning in 1972 and ending in 1981. Similarly, poverty status for all children who were under age 6 in 1982 was monitored for the decade beginning in 1982 and ending in 1991. For these two cohorts of children, the table displays the percentage who were in poverty by number of years in poverty over each ten-year period (minimum is zero; maximum is 10 years).

Source: Estimates supplied by Greg J. Duncan, Northwestern University, based on data from the Panel Study of Income Dynamics (PSID).

Figure ES 1.4

Percentage of children in the United States living in poverty,[a] by number of years in poverty:[b] 1972-1981 and 1982-1991



[a] The poverty level is based on money income and does not include noncash benefits, such as Food Stamps. Poverty thresholds reflect family size and composition and are adjusted each year using the annual average Consumer Price Index (CPI) level. The average poverty threshold for a family of four was $16,400 in 1997. Related children include biological children, stepchildren, and adopted children of the householder and all other children in the household related to the householder (or reference person) by blood, marriage, or adoption.

[b] Poverty status for all children who were under age 6 in 1972 was monitored for the decade beginning in 1972 and ending in 1981. Similarly, poverty status for all children who were under age 6 in 1982 was monitored for the decade beginning in 1982 and ending in 1991. For these two cohorts of children, the table displays the percentage who were in poverty by number of years in poverty over each 10-year period (minimum is zero; maximum is 10 years).

Source: Estimates supplied by Greg J. Duncan, Northwestern University, based on data from the Panel Study of Income Dynamics (PSID).

ES 2.1

EFFECT OF GOVERNMENT CASH AND NEAR-CASH TRANSFER PROGRAMS ON POVERTY AMONG PERSONS LIVING IN FAMILIES WITH CHILDREN UNDER AGE 18

Although the federal system of cash and near-cash transfers (including federal income and payroll taxes)[21] plays a substantial role in reducing the poverty rate of children, its collective effect has varied substantially over time. In 1979, federal cash and near-cash transfers produced a 37 percent reduction in poverty among persons in families with related children under age 18 (see Figure ES 2.1); however, by 1983, the same transfer programs produced only a 19 percent reduction in poverty. By 1989 the percentage poverty reduction had recovered to 24 percent, and it rose to 29 percent in 1993 and 34 percent in 1996.

In the absence of any federal transfers and taxes, 20 percent of all persons living in families with children would have been poor in 1996 (see Table ES 2.1). Social insurance programs other than Social Security reduced the poverty rate to 19 percent. The Social Security system reduced the poverty rate further to 18 percent. After inclusion of means-tested cash transfers, the poverty rate fell to 17 percent. Food and housing benefits cut the poverty rate to 14 percent. Finally, the federal tax system reduced the poverty rate of all persons living in families with children to 13 percent.

All of the federal cash and near-cash transfers considered in Table ES 2.1, except federal taxes, reduced poverty among persons in families with related children under age 18 in all years. Until recently, the net impact of the federal tax system was to increase the poverty rate. By 1989, however, the impact of the tax system on the number of such persons in poverty became neutral,[22] and since 1994, the federal tax system has reduced the number of persons in poverty. This is because of the recent expansion of the Earned Income Tax Credit (EITC), which provides refundable tax credits to low-income families with children and at least one working parent whose earnings are low. Because the credit is refundable, many families eligible for the EITC receive a payment from the Treasury instead of paying federal income tax.

[21] Federal cash and near-cash transfers, which transfer income from the government to individuals and families, include Social Security, unemployment compensation, workers' compensation, all means-tested cash transfers, and food and housing benefits. Federal payroll taxes (for Social Security and Medicare) can be thought of as a *negative* transfer (since they always transfer income from individuals to the federal government). Federal income taxes can be either a positive or a negative transfer. Families with children and relatively low taxable income, most of which comes from earnings, can receive a substantial income transfer from the federal government due to the Earned Income Tax Credit.

[22] By "neutral", we mean that the tax system neither increased nor decreased the number of persons in poverty.

Table ES 2.1

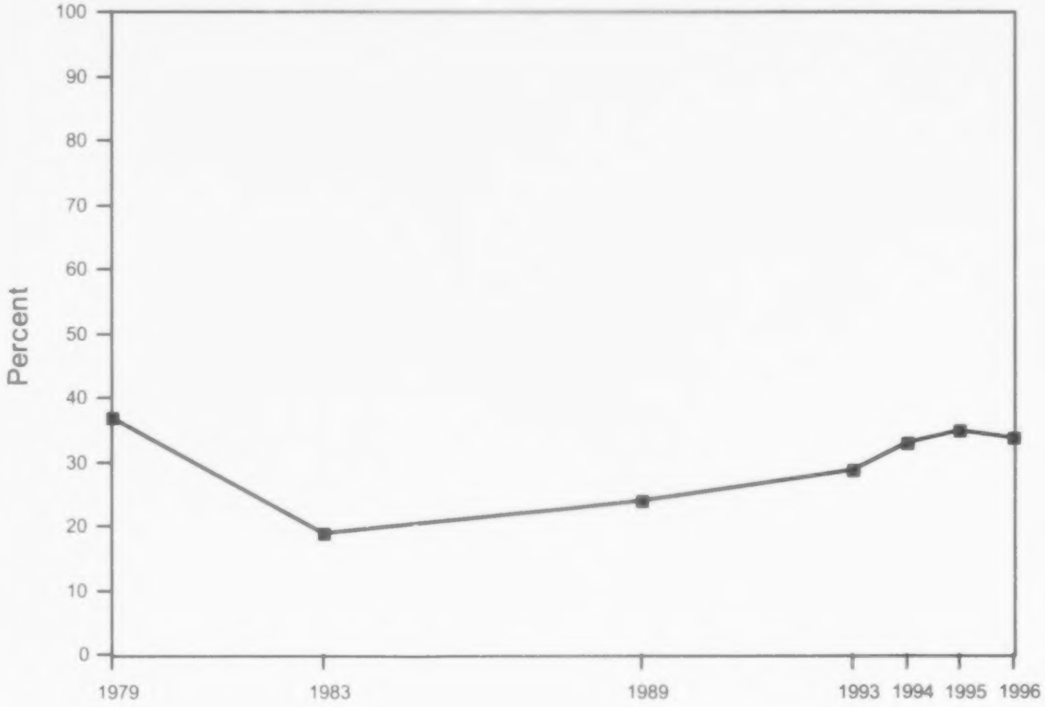
Antipoverty effectiveness of cash and near-cash transfers (including federal income and payroll taxes) for all individuals in the United States in families with related children under age 18: selected years, 1979-1996

	1979	1983	1989	1993	1994	1995	1996
Total population (in thousands)	133,435	132,123	135,430	144,551	145,814	146,227	146,797
Poverty rate (percent):							
Cash income before transfers	17	22	19	22	21	20	20
Plus social insurance (other than Social Security)	16	20	18	21	21	19	19
Plus Social Security	14	19	17	20	19	18	18
Plus means-tested cash transfers	13	18	16	19	18	17	17
Plus food and housing benefits	10	17	14	16	15	14	14
Less federal taxes	11	18	14	16	14	13	13
Total percentage reduction in poverty rate	37	19	24	29	33	35	34

Sources: Congressional Budget Office (CBO) computations using the CBO tax model, with data from the March Current Population Survey, 1980, 1984, 1990, 1994-1997. Table prepared by staff from the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services.

Figure ES 2.1

Antipoverty effectiveness of cash and near-cash transfers (including federal income and payroll taxes) for all individuals in the United States in families with related children under age 18: selected years, 1979-1996



Sources: Congressional Budget Office (CBO) computations using the CBO tax model, with data from the March Current Population Survey, 1980, 1984, 1990, 1994-1997. Table prepared by staff from the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services.

ES 2.2

MEANS-TESTED ASSISTANCE: AFDC[23] AND FOOD STAMPS

Many poor children have depended on Aid to Families with Dependent Children (AFDC) and the Food Stamp program for basic material needs. AFDC was a federal and state cash assistance program targeted at needy children and at certain others in these children's households.[24] As a result of major welfare reform enacted in August 1996, the AFDC program has now been replaced by the Temporary Assistance for Needy Families (TANF) program. TANF provides a block grant to states to design and administer their own welfare and work programs.

The Food Stamp program provides low-income households with vouchers that can be exchanged for food. The welfare reform law included significant new restrictions on Food Stamp eligibility for immigrants who have not become U.S. citizens.

Children's Receipt of AFDC and Other Welfare Benefits. Twelve percent of all children lived in families receiving AFDC or General Assistance in 1979, according to survey data (see Figure ES 2.2.A). The rate decreased slightly to 11 percent in 1989 but by 1993 had increased to 14 percent. However, by 1997, the recipiency rate had dropped to 9 percent.

Somewhat more than 7 million children lived in families receiving welfare in 1979 and 1989 (see Table ES 2.2.A). By 1994, 9.5 million children were living in families receiving welfare. By 1997, the number of children on welfare had dropped sharply to 6.2 million. Administrative data show a similar trend (see Table ES 2.2.C).

Children's Receipt of Food Stamps. Food Stamp receipt shows a similar pattern. In both 1979 and 1989, 15 percent of all children lived in households receiving Food Stamps, according to survey data (see Figure ES 2.2.A). The proportion had increased to 20 percent by 1993. In that year 14.2 million children lived in households receiving Food Stamps, up from 9.7 million in 1989 (see Table ES 2.2.B). However, the recipiency rate had dropped to 15 percent by 1997.

Administrative data for Food Stamps also show a rise in the number of children receiving Food Stamps during the late 1980s and early 1990s, followed by a recent decline (see Table ES 2.2.C). According to these data, the number of children receiving Food Stamps grew from 9.9 million in 1985 to 14.2 million in 1993. By 1996, the number had declined to 13.2 million, or 19 percent of the child population.

Receipt of AFDC and Food Stamps by Race and Hispanic Origin. The percentage of children receiving AFDC[25] and Food Stamps varies substantially by race/Hispanic origin. According to 1992 data from a different source (the Panel Study of Income Dynamics[26]), only 5 percent of white non-Hispanic children received AFDC and only 8 percent received Food Stamps (see Figure ES 2.2.B). In contrast, among black non-Hispanic children, 32 percent received AFDC and 42 percent received Food Stamps. Among Hispanic children, 18 percent received AFDC and 30 percent received Food Stamps.

There was also substantial variation among Hispanic children, depending on their descent. Among children of Cuban descent, only 8 percent received AFDC and 18 percent received Food Stamps. In contrast, among children of Puerto Rican descent, 28 percent received AFDC and 48 percent received Food Stamps. Among children of Mexican descent, 15 percent received AFDC and 30 percent received Food Stamps.

[23] Includes General Assistance.

[24] Needy children include those "who have been deprived of parental support or care because their father or mother is absent from the home continuously, is incapacitated, is deceased or is unemployed." See *Overview of Entitlement Programs: 1994 Green Book.* U.S. House of Representatives, Committee on Ways and Means.

[25] Includes General Assistance.

[26] The Panel Study of Income Dynamics excludes children who migrated to the United States after 1990. Consequently, it understates recent migrants' share of the Hispanic population. This is likely to lead to a lower estimate of receipt of transfers for Hispanics than a more representative survey such as the Current Population Survey.

Table ES 2.2.A

Percentage and number (in thousands) of children in the United States under age 18 in families receiving AFDC or General Assistance: selected years, 1979-1997

	1979	1989	1993	1994	1995	1996	1997
Number (in thousands)	7,228	7,116	9,440	9,463	8,656	7,490	6,201
Percent	12	11	14	13	12	11	9

Sources: Estimates for 1979-1994 calculated by Child Trends based on analysis of the March 1980, 1990, 1994, and 1995 Current Population Surveys. Estimates for 1995-1997 provided by U.S. Bureau of the Census.

Table ES 2.2.B

Percentage and number (in thousands) of children in the United States under age 18 in households receiving Food Stamps: selected years, 1979-1997

	1979	1989	1993	1994	1995	1996	1997
Number (in thousands)	9,336	9,696	14,193	13,677	13,115	12,272	10,987
Percent	15	15	20	19	18	17	15

Sources: Estimates for 1979-1994 calculated by Child Trends based on analysis of the March 1980, 1990, 1994, and 1995 Current Population Surveys. Estimates for 1995-1997 provided by U.S. Bureau of the Census.

Table ES 2.2.C

Percentage and number (in thousands) of children in the United States[a] under age 18 receiving AFDC or Food Stamps according to administrative records: selected years, 1985-1996[b]

	1985	1990	1991	1992	1993	1994	1995	1996
AFDC								
Number (in thousands)	7,041	7,620	8,375	9,087	9,402	9,464	9,152	8,559
Percent	11	12	13	14	14	14	13	12
Food Stamps								
Number (in thousands)	9,906	10,127	11,952	13,349	14,196	14,391	13,883	13,200
Percent	16	16	18	20	21	21	20	19

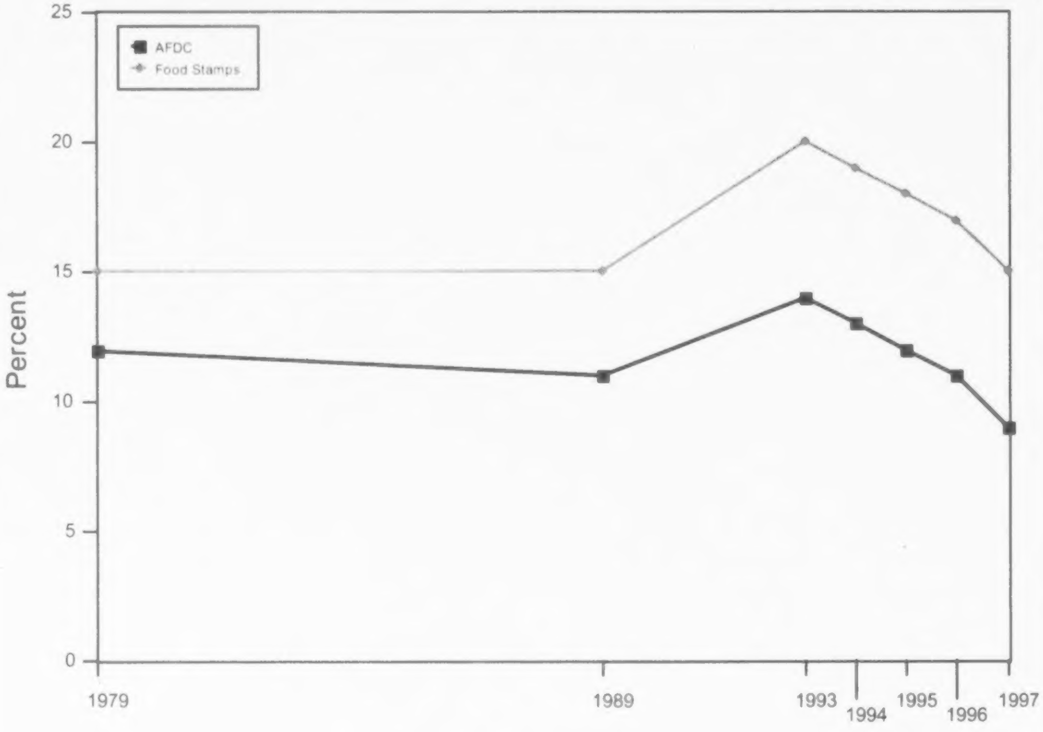
[a] Not including territories.

[b] Data for 1996 are preliminary.

Sources: AFDC statistics calculated by the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, based on unpublished data from the Administration for Children and Families, U.S. Department of Health and Human Services; Food Stamps statistics calculated by the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, based on unpublished data from the Food and Consumer Service, U.S. Department of Agriculture.

Figure ES 2.2.A

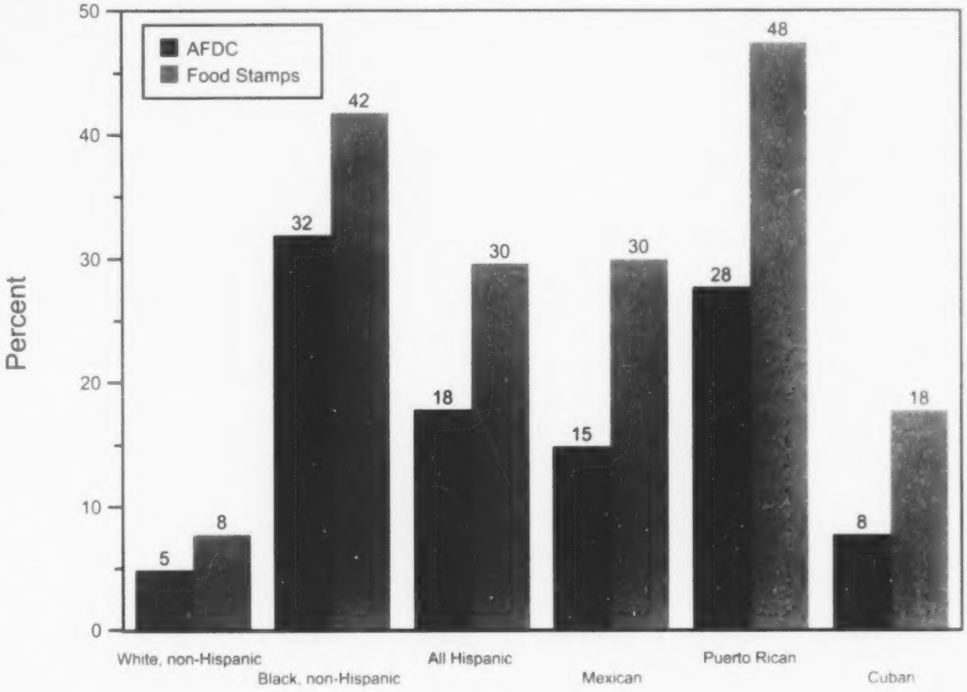
Percentage of children in the United States under age 18 living in families receiving AFDC or General Assistance, and in households receiving Food Stamps: selected years, 1979-1997



Sources: Estimates for 1979-1994 calculated by Child Trends based on analysis of the March 1980, 1990, 1994, and 1995 Current Population Surveys. Estimates for 1995-1997 provided by U.S. Bureau of the Census.

Figure ES 2.2.B

Percentage of children in the United States under age 18 in households receiving AFDC and Food Stamps, by race/ethnicity[a] and by descent: 1992



[a] Estimates for Hispanic children exclude those migrating to the United States after 1990.

Source: Estimates supplied by Sandra Hofferth, University of Michigan, based on data from the Panel Study of Income Dynamics.

ES 2.3

LONG-TERM WELFARE DEPENDENCE[27]

Long-term welfare receipt imposes large costs on taxpayers. Moreover, there is evidence that long-term welfare receipt may have a negative impact on children's completed years of schooling and may increase the likelihood of female children becoming welfare recipients when they reach adulthood.[28]

Living in a family receiving AFDC at some point during childhood is not an uncommon experience. Among all children under age 6 in 1982, 21 percent were on AFDC for at least one year over the next ten years (see Figure ES 2.3.A). Long-term welfare receipt is considerably less common: only 8 percent of all children under age 6 in 1982 were on AFDC at least six of the ten years between 1982 and 1991, and only 4 percent were on AFDC at least nine years.

Differences by Race. For black children, however, long-term welfare receipt is considerably more common than for nonblack children (see Figure ES 2.3.A). Among all black children under age 6 in 1982, 26 percent were on AFDC at least six of the next ten years (compared with 5 percent of nonblack children). Similarly, 17 percent were on AFDC for at least nine years (compared with 2 percent of nonblack children). Moreover, a majority of these black children under age 6 were on AFDC at least once between 1982 and 1991.

Changes over Time. Table ES 2.3.A compares the ten-year welfare experience of children under age 6 in 1972 with the experience of children under age 6 in 1982. For nonblack children, there is virtually no difference; however, the proportion of black children whose families *never* received welfare increased from 34 percent to 42 percent.

Welfare Benefits as a Percentage of Total Family Income. A smaller but still substantial portion of children lived in families who were highly dependent on welfare ("highly dependent" defined as families who received at least half of total income from AFDC and Food Stamps) for some period of time. Among children under age 6 in 1982, 14 percent were in families highly dependent on welfare for at least one year over the next decade (see Figure 2.3.B); 5 percent were highly dependent for six or more years. Nearly 20 percent of black children were highly dependent on welfare for six or more years, compared with 2 percent of nonblack children.

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[27] In this section, "welfare" has been defined to include Aid to Families with Dependent Children (AFDC) only or AFDC plus Food Stamps. Supplemental Security Income (SSI) and General Assistance, which are often considered to be "welfare," are *not* analyzed in this section.

[28] G.J. Duncan and W.J. Yeung. 1995. "Extent and Consequences of Welfare Dependence Among America's Children", *Children and Youth Services Review*, 17, No. 1/2, pp. 157-182; P. Gottschalk. 1996. "Is the Correlation in Welfare Participation across Generations Spurious?" *Journal of Public Economics*, vol. 63, pp. 1-25; P. Gottschalk. 1992. "The Intergenerational Transmission of Welfare Participation: Facts and Possible Causes." *Journal of Policy Analysis and Management*, Spring, pp. 224-272. For both the effect on educational attainment and welfare participation, both authors controlled for exposure to poverty. Gottschalk (1995) also controlled for unobservable correlates.

Table ES 2.3.A

Percentage of children in families[a] in the United States receiving any AFDC benefit, by number of years[b] and by race:[c] 1972-1981 and 1982-1991

	Percentage receiving any AFDC benefit				
Decade	Never	One or more years	Three or more years	Six or more years	Nine or more years
1972-1981					
All children under age 6 in 1972	78	22	14	8	4
Black	34	66	51	30	15
Nonblack	85	15	8	4	3
1982-1991					
All children under age 6 in 1982	79	21	14	8	4
Black	42	58	42	26	17
Nonblack	86	14	9	5	2

[a] In the Panel Study of Income Dynamics, the survey used for this table, families include cohabitors and other individuals who are sharing resources with family members and excludes only people such as roomers or employees who have a pure business-type connection to the family.

[b] Receipt of AFDC by families of children who were under age 6 in 1972 was monitored for the decade beginning in 1972 and ending in 1981. Similarly, receipt of AFDC by families of children who were under age 6 in 1982 was monitored for the decade beginning in 1982 and ending in 1991. For these two cohorts of children, the table displays the percentage who participated in AFDC by number of years participating over each 10-year period (minimum is never; maximum is 10 years).

[c] Persons of Hispanic origin may be of any race. Estimates for blacks and nonblacks include persons of Hispanic origin.

Source: Estimates supplied by Greg J. Duncan, Northwestern University, based on data from the Panel Study of Income Dynamics.

Table ES 2.3.B

Percentage of children in the United States for whom AFDC and Food Stamp benefits exceeded 50 percent of family income (including Food Stamps), by number of years[a] and by race:[b] 1972-1981 and 1982-1991

	Number of years in which AFDC and Food Stamp benefits were at least half of family income (including Food Stamp benefits)				
Decade	Never	One or more years	Three or more years	Six or more years	Nine or more years
1972-1981					
All children under age 6 in 1972	87	13	8	3	2
Black	50	50	32	14	8
Nonblack	93	7	4	1	1
1982-1991					
All children under age 6 in 1982	86	14	8	5	2
Black	59	41	29	19	8
Nonblack	91	9	4	2	1

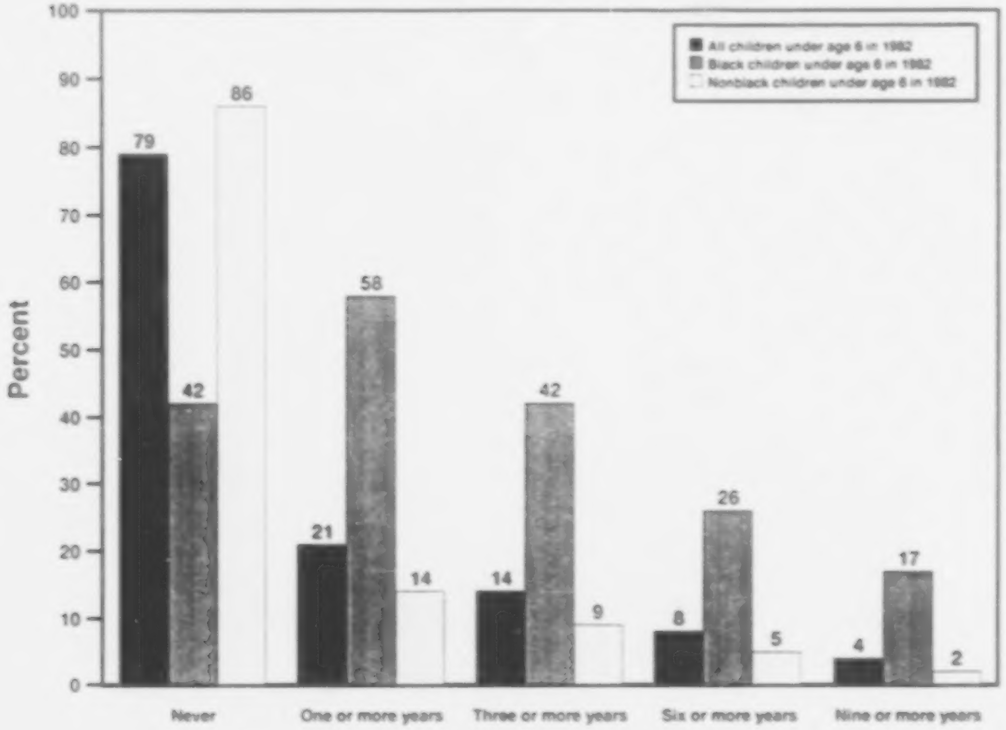
[a] Receipt of AFDC and Food Stamps by families of children who were under age 6 in 1972 was monitored for the decade beginning in 1972 and ending in 1981. Similarly, receipt of AFDC and Food Stamps by families of children who were under age 6 in 1982 was monitored for the decade beginning in 1982 and ending in 1991. For these two cohorts of children, the table displays the percentage of children for whom these benefits exceeded 50 percent of family income by number of years in which this was true over each 10-year period (minimum is never; maximum is 10 years).

[b] Persons of Hispanic origin may be of any race. Estimates for blacks and nonblacks include persons of Hispanic origin.

Source: Estimates supplied by Greg J. Duncan, Northwestern University, based on data from the Panel Study of Income Dynamics.

Figure ES 2.3.A

Percentage of children in the United States receiving any AFDC[a] benefit, by number of years and by race:[b] 1982-1991



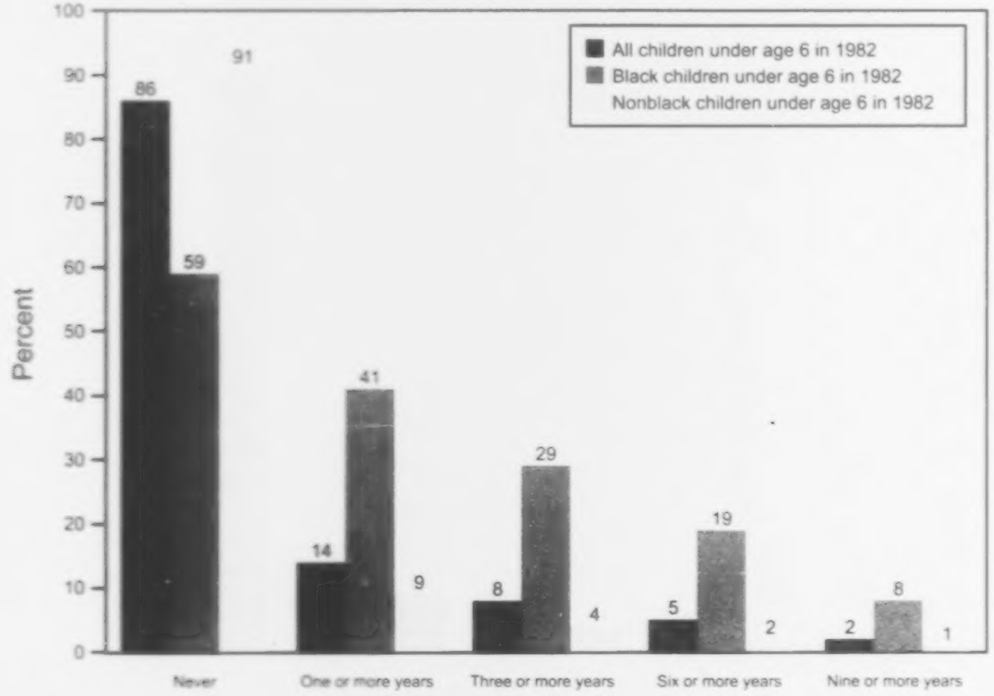
[a] Receipt of AFDC by families of children who were under age 6 in 1982 was monitored for the decade beginning in 1982 and ending in 1991. The figure displays the percentage who participated in AFDC by number of years participating over the 10-year period (minimum is zero; maximum is 10 years).

[b] Persons of Hispanic origin may be of any race. Estimates for blacks and nonblacks include persons of Hispanic origin.

Source: Estimates supplied by Greg J. Duncan, Northwestern University, based on data from the Panel Study of Income Dynamics.

Figure ES 2.3.B

Percentage of children in the United States for whom AFDC and Food Stamp benefits exceeded 50 percent of family income (including Food Stamps), by number of years[a] and by race:[b] 1982-1991



[a] Receipt of AFDC and Food Stamps by families of children who were under age 6 in 1982 was monitored for the decade beginning in 1982 and ending in 1991. The figure displays the percentage of children for whom these benefits exceeded 50 percent of family income by number of years in which this was true over the 10-year period (minimum is zero; maximum is 10 years).

[b] Persons of Hispanic origin may be of any race. Estimates for blacks and nonblacks include persons of Hispanic origin.

Source: Estimates supplied by Greg J. Duncan, Northwestern University, based on data from the Panel Study of Income Dynamics.

ES 2.4

SOURCES OF INCOME AND PAYMENT OF FEDERAL TAXES FOR FAMILIES WITH CHILDREN

Although most families with children receive most of their income from their own earnings and other private sources, federal transfer programs providing both cash and in-kind benefits are an important supplement for many families and the most important source of income for some; thus, many children's standard of living is significantly affected by these programs. Most families with children pay taxes to the federal government to help pay for these programs.

Federal Cash Benefits. Many families receive some of their income in the form of government transfers, although the overwhelming majority of families (96 percent in 1995) had other private sources of income as well (see Figure ES 2.4.A).

The most common federal cash benefit in 1995 was the Earned Income Tax Credit (EITC),[29] which the federal government paid to 31 percent of families with children.

The federal government paid cash social insurance benefits (including Social Security, Workers' Compensation, and Unemployment Insurance benefits) to 19 percent of families with children.

Cash benefits from the AFDC program were paid to 16 percent of families with children.

Supplemental Security Income (SSI) benefits were provided to 6 percent of families with children.

A small percentage (2 percent) of families with children received cash benefits from other means-tested cash programs.

Single-parent families with children are less likely than married-couple families with children to have pre-transfer income (see Table ES 2.4.A). While 99 percent of married-couple families with children had pre-transfer income, only 88 percent of single-parent families had income before transfers. It is not surprising, therefore, that single-parent families with children were more likely than married-couple families with children to receive means-tested cash benefits. For example, while only 6 percent of married-couple families received AFDC benefits, 37 percent of single-parent families received these benefits.

Federal In-Kind Benefits. Many families also receive in-kind benefits from the federal government (see Figure ES 2.4.A).

The federal government provided Food Stamps to 20 percent of families with children.

Housing benefits were provided to 5 percent of families with children.

Single-parent families with children were much more likely than married-couple families to receive in-kind benefits (see Table ES 2.4.A). For example, while only 9 percent of married-couple families received Food Stamps, 45 percent of single-parent families did so. Similarly, only 1 percent of married-couple families received housing benefits, but 15 percent of single-parent families did so.

Federal Taxes. Most families with children pay both Social Security (FICA) taxes[30] and federal income taxes[31] (see Figure ES 2.4.B). In 1995, 92 percent of all families with children paid Social Security taxes, while 78 percent paid federal income taxes. Married-couple families were more likely than single-parent families to pay federal taxes. While 97 percent of married-couple families paid Social Security taxes, only 79 percent of single-parent families did so. Similarly, while 88 percent of married-couple families paid federal income taxes, only 51 percent of single-parent families did so.

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[29] This benefit is paid to families with at least one child, one parent with earnings, and relatively low taxable income. If the credit is larger than a family's federal income tax liability, the difference is refunded to the family. The EITC figure presented in Figure ES 2.4.A and Table ES 2.4.A refers only to families that received a refund and not to families whose EITC only partially offset their federal income tax liability.

[30] FICA taxes cover the Old Age, Survivors, and Disability Insurance (OASDI or Social Security) program plus Medicare.

[31] Figure ES 2.4 displays the percentage of families with a federal income tax liability *before* the EITC. Thus, a family with $500 in tax liability before the EITC, but with a $1,000 EITC, is still counted as having a federal income tax liability.

Table ES 2.4.A

Percentage of families with children under age 18 in the United States receiving various sources of income, by family structure: 1993 and 1995

	1993	1995
Pre-transfer income		
All family structures	95	96
Unmarried head	85	88
Married couple	98	99
Cash benefits		
Social insurance income		
All family structures	20	19
Unmarried head	21	21
Married couple	20	18
AFDC		
All family structures	16	16
Unmarried head	40	37
Married couple	6	6
SSI		
All family structures	4	6
Unmarried head	6	11
Married couple	2	4
Other means-tested cash benefits		
All family structures	2	2
Unmarried head	3	3
Married couple	1	1
In-kind benefits		
Food Stamps		
All family structures	20	20
Unmarried head	45	45
Married couple	9	9
Housing		
All family structures	6	5
Unmarried head	17	15
Married couple	1	1
Earned Income Tax Credit		
All family structures	29	31
Unmarried head	51	54
Married couple	19	21

Note: The Urban Institute's Transfer Income Model (TRIM) simulates eligibility for and payment of cash and in-kind benefits for a representative sample of the U.S. population based upon the characteristics of the persons, families, and households contained in the sample. TRIM also simulates the payment of federal income and payroll taxes for this same representative sample. The results of TRIM simulations may differ from the results produced by other data sets or models because, for most programs, TRIM uses data corrected for under- and nonreporting. In the case of the Earned Income Tax Credit (EITC), for example, TRIM estimates differ from those of the U.S. Treasury because TRIM assumes that nearly everyone who is eligible for the EITC actually receives it. In reality, some ineligible families receive it and some eligible families do not. The errors do not exactly offset one another.

Source: 1994 and 1996 Current Population Survey, as processed by the Urban Institute's Transfer Income Model.

Table ES 2.4.B

Percentage of families in the United States with children under age 18 and with federal tax liability (before EITC), by type of tax and family structure: 1993 and 1995

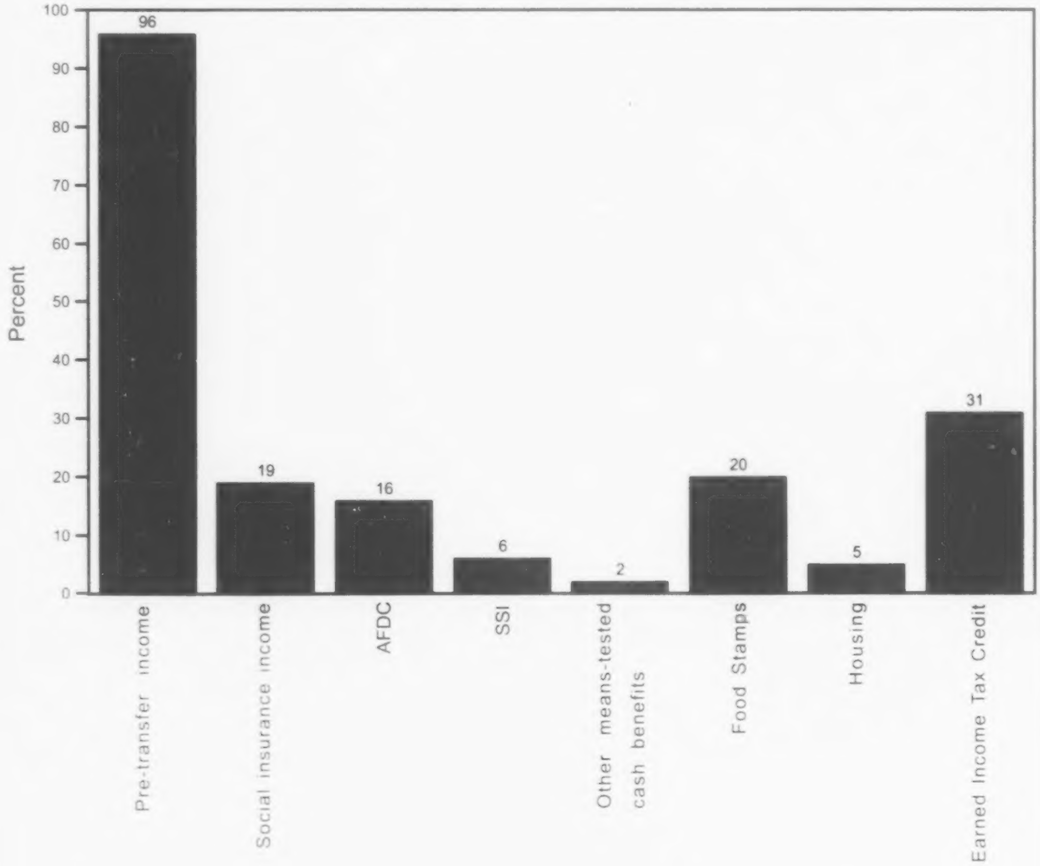
	1993	1995
Social Security (FICA)		
All family structures	91	92
Unmarried head	76	79
Married couple	97	97
Federal income tax		
All family structures	76	78
Unmarried head	48	51
Married couple	88	88

Note: The Urban Institute's Transfer Income Model (TRIM) simulates eligibility for and payment of cash and in-kind benefits for a representative sample of the U.S. population based upon the characteristics of the persons, families, and households contained in the sample. TRIM also simulates the payment of federal income and payroll taxes for this same representative sample. The results of TRIM simulations may differ from the results produced by other data sets or models because, for most programs, TRIM uses data corrected for under- and nonreporting. In the case of the Earned Income Tax Credit (EITC), for example, TRIM estimates differ from those of the U.S. Treasury because TRIM assumes that nearly everyone who is eligible for the EITC actually receives it. In reality, some ineligible families receive it and some eligible families do not. The errors do not exactly offset one another. Table displays federal income tax liability before the EITC. Thus, a family with $500 in tax liability before the EITC, but with a $1,000 EITC, is still counted as having a federal income tax liability.

Source: 1994 and 1996 Current Population Survey, as processed by the Urban Institute's Transfer Income Model.

Figure ES 2.4.A

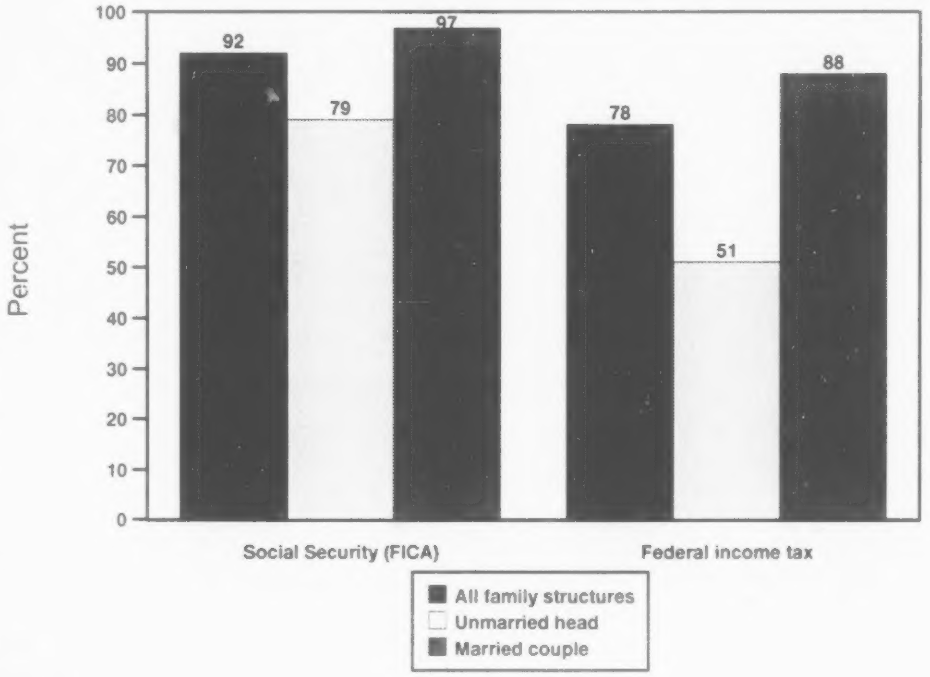
Percentage of families with children under age 18 in the United States receiving various sources of income: 1995



Source: 1994 and 1996 Current Population Survey, as processed by the Urban Institute's Transfer Income Model.

Figure ES 2.4.B

Percentage of families in the United States with children under age 18 and with federal tax liability (before EITC), by type of tax and family structure: 1995



Source: 1994 and 1996 Current Population Survey, as processed by the Urban Institute's Transfer Income Model.

ES 2.5

CHILD SUPPORT NONPAYMENT

The issue of child support has gained in importance in recent years. As rates of divorce and nonmarital births have risen, an increasing proportion of children and their custodial parents depend on this source of income for financial support and suffer correspondingly when it is not forthcoming. In addition, when noncustodial parents do not support their children financially, it is often left to the government to step in and provide support in the form of AFDC/TANF, Food Stamps, and other forms of assistance.

In many cases, and particularly where nonmarital births are concerned, families who should be receiving child support from the noncustodial parent lack a court order establishing how much is owed. In 1995, 42 percent of custodial parents lacked a court order. Among custodial parents with a court order who were owed child support, 39 percent received the full amount.[32]

Table ES 2.5.A shows the proportion of custodial mother families who had court orders for child support but received no support at all for selected years between 1978 and 1991. Table ES 2.5.B shows similar estimates for 1993 and 1995, though changes in child support questions render these estimates incomparable to estimates for earlier years. Between 1978 and 1991 the proportion of all eligible custodial mother families who received no support ranged between 21 and 28 percent. Rates of nonpayment decreased somewhat from 1978 to 1985, from 28 to 21 percent, then rose to about 24 percent by 1991. The estimates for 1993 and 1995, which are not comparable with earlier estimates, are 29 and 30 percent, respectively.

Differences by Marital Status. Women who were separated or never married were substantially less likely to have court orders for child support than those who were divorced or who had remarried.[33] In 1995, rates of nonpayment for those who had court orders ranged from 24 percent among divorced women to 44 percent among never-married women.

Differences by Race and Hispanic Origin. In most years, eligible white custodial mother families experienced lower rates of nonpayment than either black or Hispanic families. For example, in 1995, the most recent year for which estimates are available, the percentage of eligible custodial mother families receiving no payment was 27 percent for whites, 41 percent for blacks, and 42 percent for Hispanics.

Differences by Poverty Status. Women who are poor are less likely to have received child support payments. In 1995, rates of nonpayment for eligible custodial mothers were 38 percent among poor mothers and 27 percent among nonpoor mothers.

Methods of Payment. Some custodial parents receive their child support payments directly from the noncustodial parent or that parent's place of employment. Other parents use the Child Support Enforcement program, authorized under Title IV-D of the Social Security Act, to establish and enforce child support orders. Families receiving AFDC and Medicaid benefits are required to cooperate with their state's child support enforcement agency. Other families may request these services. Since fiscal year 1992, collections made by child support enforcement agencies have increased by nearly 80 percent, from $8 billion in fiscal year 1992 to $14.4 billion in fiscal year 1998.[34] For the same period, paternity establishments increased more than 40 percent and child support orders increased 16 percent.

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[32] Scoon-Rogers, L. 1999. *Child Support for Custodial Mothers and Fathers: 1995*. Current Population Reports, P-60, No. 196, Table 7 (Detailed Tables), at http://www.census.gov/hhes/www/childsupport/cs95.html.

[33] Scoon-Rogers, L. 1999. *Child Support for Custodial Mothers and Fathers: 1995*. Current Population Reports, P-60, No. 196, Table 9 (Detailed Tables), at http://www.census.gov/hhes/www/childsupport/cs95.html

[34] U.S. Department of Health and Human Services (HHS), Administration on Children and Families. 1998. "Child Support Collections Reach New Records." HHS Press Release.

Table ES 2.5.A

Child support nonpayment: percentage of eligible women[a] in the United States who are not receiving child support, by marital status and by race and Hispanic origin:[b] selected years, 1978-1991

	1978	1981	1983	1985	1987	1989	1991[c]
Total	28	23	24	21	24	25	24
Marital status							
Married	32	25	28	24	27	28	24
Divorced	27	23	24	21	22	23	22
Separated	27	16	13	12	26	20	26
Never-married	19	27	24	20	17	27	26
Race and Hispanic origin[b]							
White	27	23	23	21	23	24	22
Black	37	23	31	22	27	30	30
Hispanic	35	29	38	26	25	30	31

[a] Eligible women are those with court orders for child support.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

[c] Estimates for 1991 were produced using somewhat different assumptions than in previous years and should not be contrasted with earlier estimates.

Sources: 1978-1987 data from Child Support and Alimony, Series P-23, Nos. 112, 140, 141, 154, and 167 (Table 1 in each); and Current Population Reports, Series P-60, No. 173, Table C. Data for 1991 from Current Population Reports, Series P-60, No. 187, Table 1.

Table ES 2.5.B

Child support nonpayment: percentage of eligible women[a] in the United States who are not receiving child support, by marital status, race and Hispanic origin,[b] and poverty status: 1993 and 1995[c]

	1993	1995
Total	29	30
Marital status		
Married	26	28
Divorced	24	24
Separated	34	31
Never-married	41	44
Race and Hispanic origin[b]		
White	25	27
Black	39	41
Hispanic	35	42
Poverty status		
Poor	35	38
Nonpoor	26	27

[a] Eligible women are those with court orders for child support.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

[c] Starting with the April 1994 CPS questionnaire, revisions were made to the questions surrounding child support awards and the receipt of payments. Therefore, data for 1991 and earlier (Table ES 2.5.A) are not comparable to the data presented in this table.

Sources: U.S. Bureau of the Census. Current Population Reports, Series P60, No. 196; data for 1993 and 1995 can be found at: www.census.gov/hhes/www/childsupport/chldsu94.html (Table 4) and www.census.gov/hhes/www/childsupport/chldsu96.html (Table 4).

ES 3.1

PARENTAL LABOR FORCE PARTICIPATION: PERCENTAGE OF CHILDREN WITH BOTH PARENTS OR ONLY RESIDENT PARENT IN THE LABOR FORCE

Over the last three decades, the proportion of single-parent families has increased, as has the proportion of mothers who work regardless of marital status.[35] These factors have reduced the percentage of children who have a parent at home full-time. Figure ES 3.1 presents data on the percentage of children who have all resident parents participating in the labor force[36] at some level for the years 1985, 1990, and 1994 through 1998.

Parents in the Labor Force by Family Structure. Between 1985 and 1998, the percentage of children who have all resident parents in the labor force increased from 59 percent to 68 percent (see Figure ES 3.1). Between 1990 and 1996, the percentage of children who have all resident parents participating in the labor force was similar for both married-couple families and single-mother families; however, the rate for single-mother families increased sharply from 66 percent in 1996 to 74 percent in 1998, while the rate for married-couple families was nearly unchanged (64 percent in 1996 and 65 percent in 1998). The rate for children in single-father families was much higher, at 91 percent in 1998.

Parents in the Labor Force by Age of Child. Children under age 6 have been less likely than older children to have all resident parents in the labor force (see Table ES 3.1). In 1998, 62 percent of children under age 6 had all resident parents in the labor force, compared with 71 percent for older children.

Parents in the Labor Force by Race and Hispanic Origin. Between 1985 and 1990, white children, black children, and Hispanic children all became more likely to have all their resident parents in the labor force (see Table ES 3.1). Between 1990 and 1996, the rates stayed virtually the same for blacks and Hispanics and increased modestly for whites; however, the rate for all three groups increased between 1996 and 1998, with especially large increases for blacks and Hispanics. Between 1996 and 1998, the rate for black children of all ages increased from 64 percent to 73 percent, and the rate for black children under age 6 increased from 58 percent to 71 percent. Between 1996 and 1998, the rate for Hispanic children of all ages increased from 50 percent to 58 percent. By 1998, 68 percent of white children, 73 percent of black children, and 58 percent of Hispanic children lived in families in which all resident parents were working.

[35] Bianchi, S.M. 1995. "Changing Economic Roles of Women and Men." In *State of the Union: America in the 1990s*, Volume 1 (Reynolds Farley, ed.). New York: Russell Sage Foundation.

[36] Participating in the labor force means either working or actively seeking work.

Table ES 3.1

Percentage of children in the United States with both parents or only resident parent in the labor force, by age, family structure, and race and Hispanic origin:[a] selected years, 1985-1998

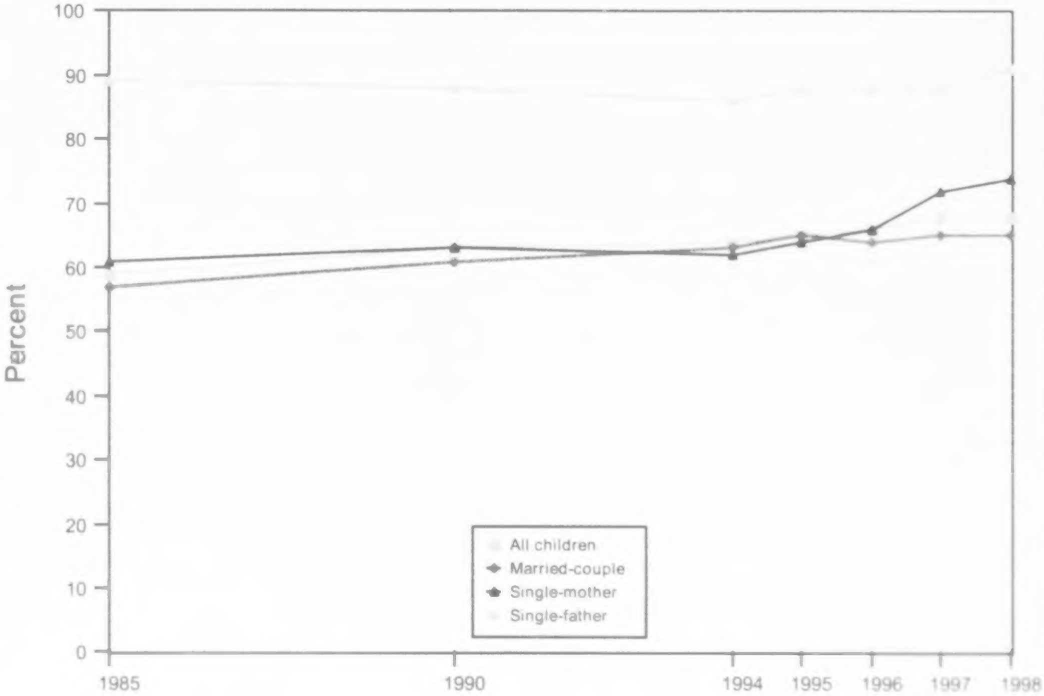
	1985	1990	1994	1995	1996	1997	1998
All children	59	63	64	65	66	68	68
Under age 6	51	55	56	59	58	61	62
Ages 6-17	63	67	68	69	70	71	71
Family structure							
Married-couple	57	61	63	65	64	65	65
Under age 6	51	54	57	59	58	58	58
Ages 6-17	61	65	67	68	67	69	68
Single-mother	61	63	62	64	66	72	74
Under age 6	49	51	52	54	56	65	67
Ages 6-17	67	70	68	69	72	76	77
Single-father	89	88	86	88	88	88	91
Under age 6	90	90	85	86	86	89	94
Ages 6-17	89	88	86	88	89	88	90
Race and Hispanic origin[a]							
White	59	63	64	66	66	68	68
Under age 6	51	55	57	59	58	61	61
Ages 6-17	63	67	68	70	70	71	71
Black	60	63	62	64	64	71	73
Under age 6	54	55	56	57	58	68	71
Ages 6-17	63	67	66	67	68	73	75
Hispanic	45	50	49	50	50	54	58
Under age 6	40	44	41	44	43	49	52
Ages 6-17	48	54	54	54	55	57	62

[a] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Sources: 1985, 1990, 1994, and 1995 statistics calculated by Child Trends based on the March 1985, 1990, 1994, and 1995 Current Population Surveys; 1996, 1997, and 1998 statistics calculated by the U.S. Bureau of the Census based on the 1996, 1997, and 1998 Current Population Surveys.

Figure ES 3.1

Percentage of children under age 18 in the United States with both parents or only resident parent in the labor force, by family structure: selected years, 1985-1998



Sources: 1985, 1990, 1994, and 1995 statistics calculated by Child Trends based on the March 1985, 1990, 1994, and 1995 Current Population Surveys; 1996, 1997, and 1998 statistics calculated by the U.S. Bureau of the Census based on the 1996, 1997, and 1998 Current Population Surveys.

ES 3.2

MATERNAL EMPLOYMENT: PERCENTAGE OF MOTHERS WITH CHILDREN UNDER AGE 18 WHO ARE EMPLOYED, FULL-TIME AND PART-TIME

Over the last several decades, the increasing proportion of mothers moving into employment has had substantial consequences for the everyday lives of families with children. Maternal employment adds to the financial resources available to families and is often the only source of income for families headed by single mothers—although if child-care services are purchased and unsubsidized, they may offset a substantial percentage of low-wage mothers' earnings.

Maternal employment rates for all mothers with children under age 18 increased steadily from 53 percent to 63 percent between 1980 and 1990 (see Figure ES 3.2.A). From 1990 to 1997, rates increased at a slower pace from 63 percent to 68 percent. This pattern of increasing maternal employment was evident for all mothers, regardless of the age of their children.

Differences by Age of Child. The percentage of mothers who are employed increases with the age of the youngest child for all time periods presented in Table ES 3.2.A. In 1997, 57 percent of mothers with children under age 3 were employed, compared with 64 percent and 74 percent for mothers with youngest children ages 3-5 and 6-17, respectively.

Differences by Race and Hispanic Origin. In 1997, 69 percent of white mothers, 65 percent of black mothers, and 53 percent of Hispanic mothers were employed (see Table ES 3.2.A). Black mothers were the most likely to be employed full-time (55 percent). All three groups substantially increased their rates of employment between 1980 and 1990 and have continued to increase their rates of employment during the 1990s.

Differences by Marital Status. Throughout the period between 1980 and 1997, divorced mothers had higher rates of employment than never-married or currently married mothers (see Table ES 3.2.A). However, the gap narrowed over the period as employment increased from 62 percent to 69 percent for married mothers and from 40 percent to 57 percent for never-married mothers. In contrast, there was only a slight increase from 75 percent to 77 percent for divorced mothers.

Full-Time Versus Part-Time Employment. Among all employed mothers, 73 percent were working full-time in 1997 (see Figure ES 3.2.B). Employed mothers with older children were more likely to work full-time than those with young children, with rates ranging from 66 percent for mothers with children under age 3, to 76 percent for mothers with a youngest child between the ages of 6 and 17. Divorced mothers were more likely to work full-time (85 percent) than never-married mothers (75 percent) and married mothers (70 percent). Black mothers who were employed were more likely to work full-time (84 percent) than white mothers (71 percent) or Hispanic mothers (77 percent).

Table ES 3.2.A

Percentage of mothers in the United States with children under age 18 who were employed, full-time and part-time,[a] by age of youngest child, marital status, and race and Hispanic origin:[b] selected years, 1980-1997

	1980	1988	1990	1994	1995	1996	1997
Total employed	53	60	63	64	66	66	68
Working full-time	—	44	46	45	46	47	50
Working part-time	—	16	17	19	19	19	18
Age of youngest child							
Under age 3	37	47	50	52	54	55	57
Working full-time	—	32	34	34	35	36	38
Working part-time	—	15	16	18	19	19	19
Ages 3-5	50	57	61	60	62	63	64
Working full-time	—	40	43	41	42	43	47
Working part-time	—	17	18	19	20	20	17
Ages 6-17	60	70	70	72	73	74	74
Working full-time	—	53	53	53	53	55	56
Working part-time	—	17	17	19	19	19	18
Marital status							
Married, spouse present	62	63	66	67	67	68	69
Working full-time	—	43	44	45	45	46	48
Working part-time	—	19	19	21	22	21	20
Never-married	40	45	46	48	48	49	57
Working full-time	—	32	36	34	35	35	42
Working part-time	—	8	9	12	13	14	14
Divorced	75	75	74	77	77	79	77
Working full-time	—	66	66	63	64	66	65
Working part-time	—	9	9	11	13	13	12
Race and Hispanic origin							
White	52	62	63	65	67	67	69
Working full-time	—	44	44	45	46	47	48
Working part-time	—	18	19	20	21	21	20
Black	54	56	61	58	62	63	65
Working full-time	—	48	53	47	50	52	55
Working part-time	—	8	8	11	11	10	10
Hispanic	42	49	50	48	49	49	53
Working full-time	—	38	39	36	37	37	41
Working part-time	—	11	11	12	12	12	12

[a] Percentages for 1980 are not presented separately by marital status and full-time versus part-time due to incompatibilities with definitions used in later years. Sums may not add to totals due to rounding.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Source: Unpublished tables, Bureau of Labor Statistics, based on analyses of March Current Population Surveys for 1980, 1988, 1990, and 1994-1997.

Table ES 3.2.B

Number (in thousands) and percentage of employed mothers in the United States who worked full-time, by age of youngest child, marital status, and race and Hispanic origin:[a] 1997

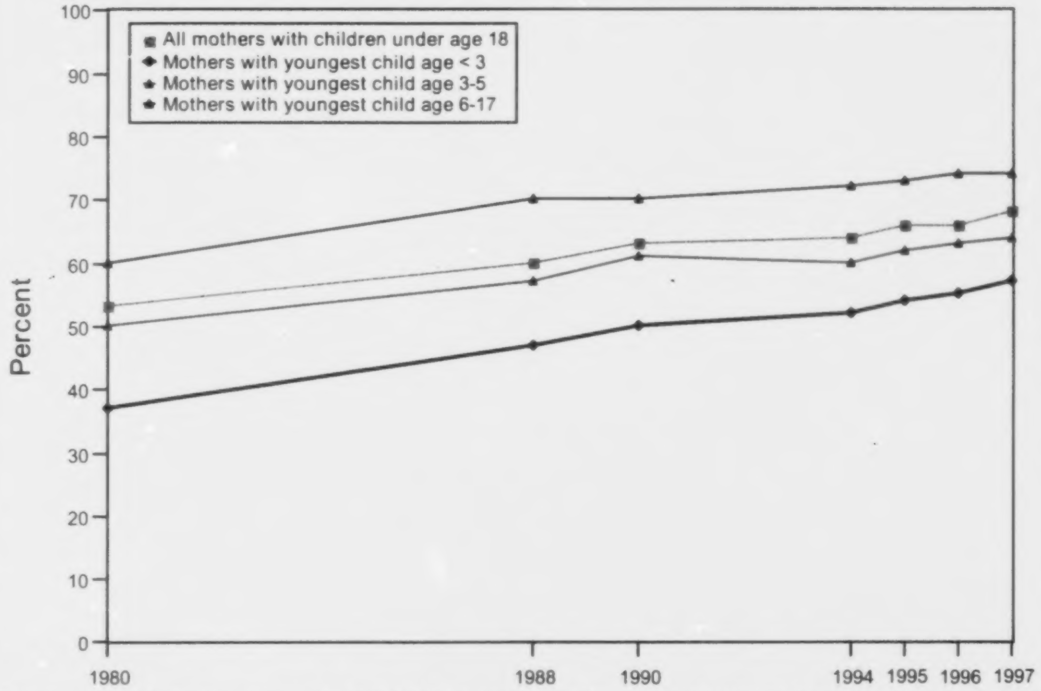
	Full-time	Part-time	Total	Percent Full-time
All mothers	17,591	6,492	24,082	73
Age of youngest child				
Under age 3	3,564	1,802	5,366	66
Ages 3-5	3,231	1,203	4,434	73
Ages 6-17	10,796	3,486	14,282	76
Marital status				
Married	12,350	5,171	17,521	70
Never-married	1,729	576	2,305	75
Divorced	2,336	420	2,756	85
Race and Hispanic origin[a]				
White	13,840	5,760	19,600	71
Black	2,852	538	3,390	84
Hispanic	1,874	557	2,431	77

[a] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Source: Unpublished tables, Bureau of Labor Statistics, based on analysis of March Current Population Survey for 1997.

Figure ES 3.2.A

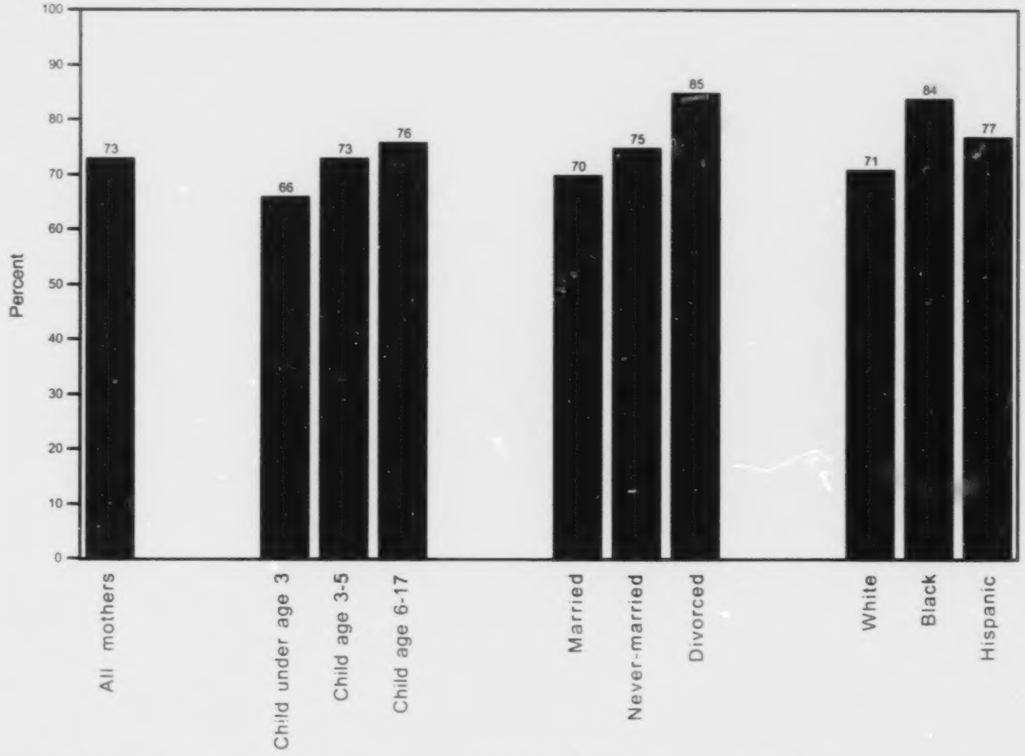
Percentage of mothers in the United States with children under age 18 who were employed, by age of youngest child: selected years, 1980-1997



Source: Unpublished tables, Bureau of Labor Statistics, based on analyses of March Current Population Surveys for 1980, 1988, 1990, and 1994-1996.

Figure ES 3.2.B

Percentage of employed mothers in the United States who worked full-time, by age of youngest child, marital status, and race and Hispanic origin:[a] 1997



[a]Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Source: Unpublished tables, Bureau of Labor Statistics, based on analysis of March Current Population Survey for 1997.

ES 3.3

PARENTAL LABOR FORCE DETACHMENT: THE PERCENTAGE OF CHILDREN UNDER AGE 18 WITH NO RESIDENT PARENTS IN THE LABOR FORCE

Attachment to the labor force is, for the vast majority of families, a necessary prerequisite for financial and social stability. Children who have no parents in the labor force are at considerably higher risk of poverty, which can have long-term negative consequences for their well-being.[37, 38]

Table ES 3.3 presents trends in the proportion of children living in families where there were no resident parents attached to the labor force. Data are presented for 1985, 1990, and 1994 through 1998, by family structure, age of child, and race and Hispanic origin. Between 1994 and 1998, there was a large and statistically significant decline in the proportion of children living in families in which no resident parent was attached to the labor force, as shown in Figure ES 3.3.

Labor Force Detachment by Family Structure and Age of Child. The rate of parental labor force detachment for children in married-couple families was very low, fluctuating between 2 percent and 3 percent between 1985 and 1998. However, detachment rates for children in families headed by single mothers were more than 10 times higher throughout the period. In 1985, 39 percent of children living in single-mother families had a nonworking mother (see Figure ES 3.3). This percentage, which stood at 38 percent in 1994, dropped significantly to 26 percent by 1998. Children living in families headed by single fathers experienced parental labor force detachment rates of 9 percent in 1998, compared with a significantly higher 26 percent for children in families headed by single mothers and a significantly lower 2 percent for children in married-couple families.

In families headed by single mothers, mothers of children under age 6 were more likely to be detached from the labor force than mothers of older children. The gap between the two age groups was 10 percentage points in 1998 (33 percent versus 23 percent).

Labor Force Detachment by Race and Hispanic Origin. White children were significantly less likely than black or Hispanic children to have no resident parents in the labor force in 1998, with rates of 7 percent, 17 percent, and 13 percent, respectively. However, all three groups experienced significant drops in labor force detachment between 1994 and 1998.

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[37] Blau, F., and Grossberg, A. 1992. "Maternal Labor Supply and Children's Cognitive Development." *Review of Economics and Statistics* 74: 474-481.

[38] Duncan, G., and Brooks-Gunn, J. 1997. "Income Effects across the Life Span: Integration and Interpretation." In *The Consequences of Growing Up Poor* (G. Duncan and J. Brooks-Gunn, eds.). New York: Russell Sage Press.

Table ES 3.3

Percentage of children in the United States with no resident parent in the labor force, by age, family structure, and race and Hispanic origin:[a] selected years, 1985-1998

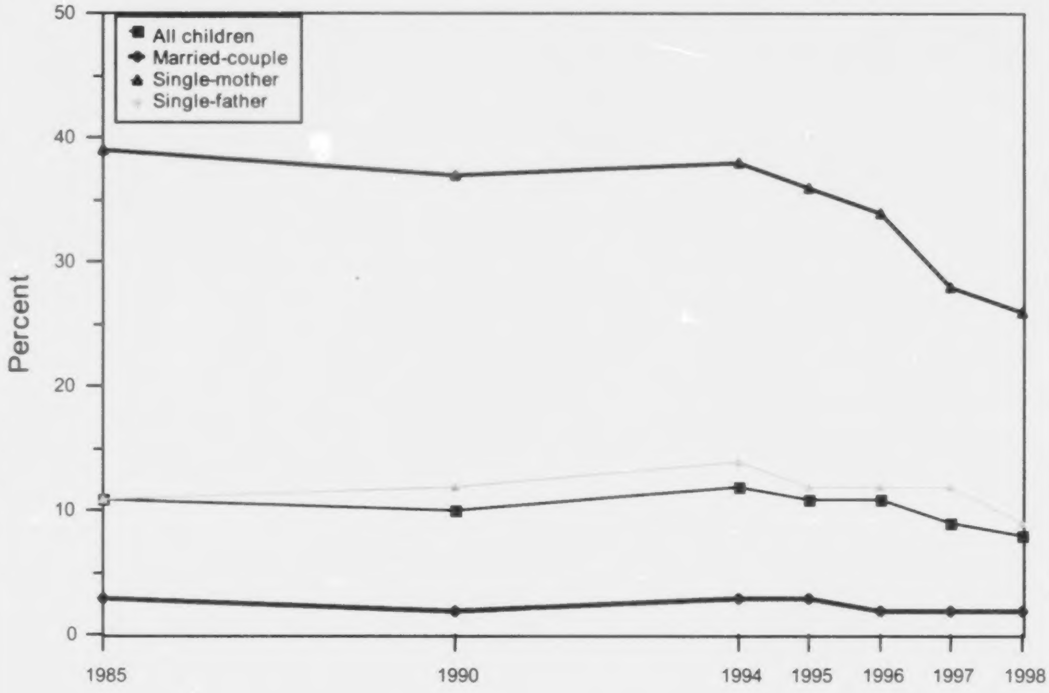
	1985	1990	1994	1995	1996	1997	1998
All children	11	10	12	11	11	9	8
Under age 6	12	13	14	14	13	10	9
Ages 6-17	10	9	11	10	9	8	8
Family structure							
Married-couple	3	2	3	3	2	2	2
Under age 6	2	2	2	2	2	2	2
Ages 6-17	3	3	3	3	3	2	2
Single-mother	39	37	38	36	34	28	26
Under age 6	51	49	48	46	44	35	33
Ages 6-17	33	30	32	31	28	24	23
Single-father	11	12	14	12	12	12	9
Under age 6	10	10	15	14	14	11	6
Ages 6-17	11	12	14	12	11	12	10
Race and Hispanic origin[a]							
White	8	7	9	8	7	7	7
Under age 6	8	9	11	10	9	7	7
Ages 6-17	7	6	8	7	7	6	6
Black	27	26	27	27	25	20	17
Under age 6	33	34	33	33	32	23	20
Ages 6-17	24	21	24	23	21	18	15
Hispanic	19	17	19	19	17	14	13
Under age 6	20	19	22	21	20	15	14
Ages 6-17	19	16	18	17	15	13	13

[a] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Sources: 1985, 1990, 1994, and 1995 statistics calculated by Child Trends based on analyses of the March 1985, 1990, 1994, and 1995 Current Population Surveys; 1996, 1997, and 1998 statistics calculated by U.S. Bureau of the Census based on the March 1996, 1997, and 1998 Current Population Surveys.

Figure ES 3.3

Percentage of children under age 18 in the United States with no resident parent in the labor force, by family structure: selected years, 1985-1998



Sources: 1985, 1990, 1994, and 1995 statistics calculated by Child Trends based on analyses of the March 1985, 1990, 1994, and 1995 Current Population Surveys; 1996, 1997, and 1998 statistics calculated by U.S. Bureau of the Census based on the March 1996, 1997, and 1998 Current Population Surveys.

ES 3.4

SECURE PARENTAL LABOR FORCE ATTACHMENT: PERCENTAGE OF CHILDREN WITH AT LEAST ONE FULLY EMPLOYED (FULL-TIME, FULL-YEAR) RESIDENT PARENT

Parents' full-time employment over the course of an entire year indicates a secure attachment to the labor force[39] and produces a degree of financial security for their children. As shown in Table ES 3.4, the percentage of children in families with at least one securely attached parent increased from 69 percent to 76 percent over the period 1984 to 1997. However, there were substantial and persistent variations in the rate of secure parental attachment to the labor force by race and Hispanic origin, poverty status, age of children, and family structure.

Differences by Race and Hispanic Origin. The parents of children in white families consistently have the highest rates of secure attachment to the labor force. Throughout the entire 1984-1997 period, more than 70 percent of white children had at least one parent with a secure labor force attachment. In 1997, the rate for white children was 79 percent (see Figure ES 3.4). In contrast, 58 percent of black children and 67 percent of Hispanic children lived in families with at least one parent who was securely attached to the labor force.[40]

Differences by Poverty Status. Secure parental labor force attachment is associated with escaping poverty. In 1997, only 26 percent of poor families with children had at least one parent with a secure labor force attachment, while 88 percent of non-poor families had at least one securely attached parent (see Figure ES 3.4). The percentage of poor families with at least one parent securely attached to the labor force has increased over the period, from 20 percent in 1984 to 26 percent in 1997.

Differences by Age of Children. Secure parental labor force attachment is more common among families with older children. In 1997, 79 percent of families with children ages 12 through 17 had at least one parent who was securely attached to the labor force, compared with 77 percent of families with children ages 6 through 11 and 72 percent of families with children under age 6 (see Figure ES 3.4).[40]

Differences by Family Structure. Married-couple families are significantly more likely than other family types to have at least one parent securely attached to the labor force. In 1997, 88 percent of married-couple families had at least one securely attached parent. In contrast, only 41 percent of the single-mother families and 70 percent of the single-father families had a securely attached parent (see Figure ES 3.4).[40]

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[39] Full employment is defined as having worked at least 50 weeks during the preceding year, working at least 35 hours per week for the majority of those weeks.

[40] All of the differences among these three groups are statistically significant.

Table ES 3.4

Percentage of children in the United States with at least one fully employed (full-time, full-year)[a] resident parent, by race and Hispanic origin,[b] poverty status, age, and family structure: selected years, 1984-1997

	1984	1989	1993	1994	1995	1996	1997
Total	69	73	71	73	74	75	76
Race and Hispanic origin[b]							
White	73	78	76	77	78	79	79
Black	48	51	49	52	53	56	58
Hispanic	58	62	57	59	61	64	67
Poverty status							
At or below poverty	20	22	21	24	25	25	26
Above poverty	83	85	85	86	86	87	88
Child's age							
Under age 6	65	69	67	68	69	71	72
Ages 6-11	70	74	72	73	75	76	77
Ages 12-17	73	78	75	76	78	78	79
Family structure							
Married-couple	80	85	85	86	87	88	88
Single-mother	32	34	33	35	38	39	41
Single-father	61	64	61	60	67	67	70

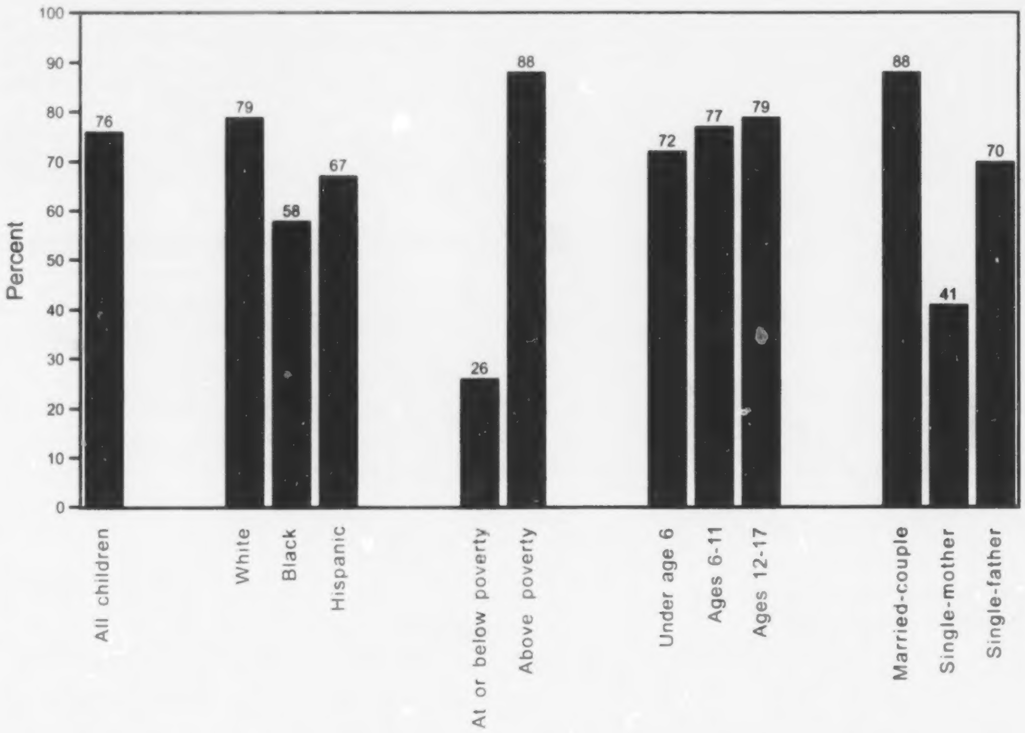
[a] Full employment is defined as having worked at least 50 weeks during the preceding year, working at least 35 hours per week for the majority of those weeks.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Sources: 1984-1994 statistics calculated by Child Trends based on analyses of the March 1985, 1994, and 1995 Current Population Surveys; 1995, 1996, and 1997 statistics calculated by U.S. Bureau of the Census based on analyses of the March 1996, 1997, and 1998 Current Population Surveys.

Figure ES 3.4

Percentage of children under age 18 in the United States with at least one fully employed (full-time, full-year)[a] resident parent, by race and Hispanic origin,[b] poverty status, age, and family structure: 1997



[a] Full employment is defined as having worked at least 50 weeks during the preceding year, working at least 35 hours per week for the majority of those weeks.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

Source: Estimates calculated by U.S. Bureau of the Census based on analyses of the March 1998 Current Population Survey.

ES 3.5

CHILD CARE

The child care needs of American families have been increasing over the past several decades as mothers have moved into the labor force in ever greater numbers. Child care that is reliable and of high quality is especially important for infants and preschoolers because they are dependent on caregivers for their basic needs and safety. Yet, the quality of care varies substantially in the United States.[41] Research has clearly demonstrated that child-care quality can have substantial impacts on the development of a young child's personality, cognitive skills, social skills, and well-being.

Child-Care Centers and Preschools. Working mothers with preschool children have increasingly chosen care provided in day care centers and preschools. In 1965, only 8 percent of mothers working full-time chose day care centers and preschools for child care (see Table ES 3.5.A). By 1994, 34 percent did so. Similarly, for children whose mothers worked part-time, use of child care centers and preschools increased from 3 percent in 1965 to 22 percent in 1994.

Child Care in a Nonrelative's Home. For children of full-time working mothers, care in a nonrelative's home ranged from 25 to 27 percent between 1977 and 1988, then declined to 18 percent by 1994. Similarly, for children whose mothers worked part-time, care in a nonrelative's home peaked at 21 percent in 1986 and has since declined to 10 percent.

Child Care at Home. The fraction of children of full-time working mothers cared for at home by either relatives or nonrelatives was 26 percent in 1994, compared with 21 percent in 1988 and 47 percent in 1965. The fraction of children of part-time working mothers cared for at home was 45 percent in 1994, compared with 40 percent in 1984-1985 and 47 percent in 1965 (see Table ES 3.5.A).

Child Care Arrangements by Various Child and Family Characteristics. Table ES 3.5.B presents 1994 estimates of the distribution of child-care types used by all working mothers (regardless of hours worked) by child's race and Hispanic origin and age, mother's marital status and educational attainment, poverty status, monthly income, and AFDC program participation status. The information in this table indicates the following:

- Relatives usually care for employed mothers' children before their first birthday. In 1994, 56 percent of infants were cared for by relatives either inside or outside the child's home (see Figure ES 3.5). About one-quarter were cared for by nonrelatives inside or outside the child's home, and only 18 percent were cared for in day care centers or preschools. Among toddlers (ages 1-2), about half (51 percent) were cared for by relatives, while the other half were split about evenly between day care centers and preschools (26 percent) and nonrelatives (22 percent). Among children of preschool age (ages 3-4), 44 percent were cared for by relatives, another 37 percent in day care centers and preschools, and 16 percent by nonrelatives.
- Hispanic families were less likely than white and black non-Hispanics to use day care centers and preschools. In 1994, 19 percent of Hispanic children of working mothers were cared for in day care centers and preschools, compared with 31 percent of non-Hispanic white children and 34 percent of non-Hispanic black children.

[41] Whitebook, M., Phillips, D., and Howes, C. 1989. *National Child Care Staffing Study.* Oakland, Calif.: Child Care Employees Project; see also Hayes, C.D., Palmer, J.L., and Zaslow, M.J. (eds.). 1990. *Who Cares for America's Children? Child Care Policy for the 1990s.* Washington, D.C.: National Academy Press.

- Children of employed mothers with higher socioeconomic status were the most likely to be receiving care from a day care center or preschool. For example, 22 percent of poor children under age 5 received care from such sources, compared with 30 percent of non-poor children. Only 20 percent of children whose mothers had less than a high school diploma received care from a day care center or preschool, compared with 35 percent of children whose mothers had a college degree. In contrast, 63 percent of children of poor mothers were cared for by relatives, compared with only 48 percent of children of non-poor mothers; and 64 percent of children of working mothers without a high school diploma were cared for by relatives, compared with only 38 percent of children of mothers with a college degree.
- Children whose families participated in the Aid to Families with Dependent Children (AFDC) program were about as likely as other children to attend day care centers or preschools (27 percent for participants versus 29 percent for nonparticipants). They were somewhat less likely to be cared for by their fathers (15 percent for participants versus 19 percent for nonparticipants) and more likely to be cared for by their grandparents (21 percent for participants versus 16 percent for nonparticipants).[42]

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[42] Statistics for grandparents provided in Casper, Lynne M. 1997. "Who's Minding Our Preschoolers? Fall 1994 (Update)." *Current Population Reports*, Supplementary Tables, PPL-81. Washington, D.C.: U.S. Bureau of the Census.

Table ES 3.5.A

Percentage distribution of child care arrangements of children under age 5 in the United States with employed mothers, by mother's employment status: selected years, 1965-1994

	1965[a,b]	1977[b]	1982[b]	1984-85	1986	1987	1988	1991	1993	1994
Mother employed full-time										
Day care center or preschool	8	15	20	30	26	28	31	28	34	34
Nonrelative care in provider's home	20	27	25	27	26	25	27	21	18	18
Grandparent/other relative in relative's home	18	21	21	16	18	14	14	14	17	17
Father in child's home	10	11	11	10	11	10	8	15	11	13
Other care in child's home[c]	37	18	16	13	15	15	13	15	15	13
Other care outside child's home[d]	7	8	7	4	5	8	7	7	5	5
Mother employed part-time										
Day care center or preschool	3	9	8	17	16	18	17	15	23	22
Nonrelative care in provider's home	8	16	19	14	21	18	17	13	14	10
Grandparent/other relative in relative's home	9	13	16	16	14	13	11	11	13	13
Father in child's home	23	23	21	22	21	25	27	29	25	28
Other care in child's home[c]	24	20	20	18	14	15	14	17	15	17
Other care outside child's home[d]	33	19	26	13	13	13	14	15	10	10

[a] Data for 1965 are for children under 6 years old.

[b] Data for 1982 and earlier are based on survey questions that asked about care arrangements for the youngest child in the family. Percentages for 1982 and earlier have been recalculated after removal of cases in "don't know" category.

[c] Includes care by relatives and nonrelatives.

[d] Includes children who are cared for by their mothers at work, or in kindergarten or school-based activities.

Sources: U.S. Bureau of the Census, Current Population Reports, Series P-23, No. 117, Table A; U.S. Bureau of the Census, Current Population Reports, Series P-70, No. 9, No. 20, No. 30, No. 36, and No. 53 (Table 1 in each); Casper, L.M. 1997. "Who's Minding Our Preschoolers? Fall 1994 (Update)." Current Population Reports, PPL-81 (Tables B and 2). Washington, D.C.: U.S. Bureau of the Census.

Table ES 3.5.B

Percentage distribution of child care arrangements of children under age 5 in the United States with employed mothers, by selected characteristics: 1994

	Day Care Center/ Preschool[a]	Father in Child's Home	Other Relative in Child's Home	Nonrelative in Child's Home	Relative in Another Home	Nonrelative in Another Home	Mother Cares for Child[b]	Other Care Arrangements[c]
All preschoolers	29	18	9	5	16	15	5	1
Race and Hispanic origin								
White, non-Hispanic	31	20	7	6	14	16	7	1
Black, non-Hispanic	34	11	13	2	23	13	3	2
Hispanic[d]	19	17	15	6	24	15	2	2
Other	21	22	19	6	12	15	3	2
Age of child								
Under 1 year	18	21	11	7	17	19	7	0
Ages 1-2	26	19	10	5	18	17	4	0
Ages 3-4	37	17	8	4	13	12	6	2
Marital status								
Married, husband present	29	22	6	6	14	16	6	1
All other marital statuses[e]	31	5	21	3	22	15	3	1
Educational attainment								
Less than high school	20	24	15	4	20	12	5	1
High school, 4 years	26	17	11	3	19	16	5	1
College, 1-3 years	32	21	7	4	14	14	6	1
College, 4 or more years	35	15	6	9	11	17	5	1
Poverty status[f]								
Below poverty	22	18	15	4	20	11	10	1
Above poverty	30	19	9	5	15	16	5	1
Monthly family income[f]								
Less than $1,200	24	17	11	4	22	15	6	1
$1,200 to $2,999	26	22	10	3	19	13	6	1
$3,000 to $4,499	27	19	10	4	15	18	6	2
$4,500 and over	36	15	7	9	12	16	5	1
Program participation								
AFDC recipient	27	15	17	3	18	11	6	2
AFDC nonrecipient	29	19	9	5	16	16	5	1

[a] Includes day care centers, nursery schools, and preschools.

[b] Includes mothers working at home or away from home.

[c] Includes preschoolers in kindergarten and school-based activities.

[d] Persons of Hispanic origin may be of any race.

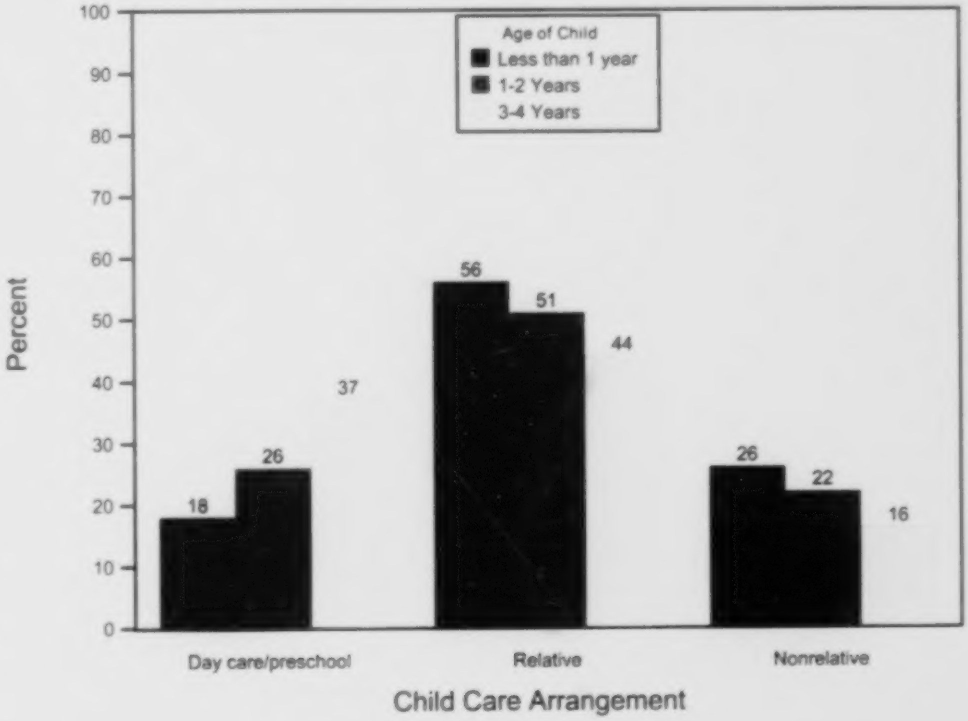
[e] Includes married, spouse absent, widowed, separated, divorced, and never married.

[f] Omits preschoolers whose families did not report income.

Source: Casper, Lynne M. 1997. "Who's Minding Our Preschoolers? Fall 1994 (Update)." Current Population Reports, PPL-81 (Tables B, 1, and 2). Washington, D.C.: U.S. Bureau of the Census.

Figure ES 3.5

Percentage distribution of child care arrangements of children under age 5 in the United States with employed mothers, by age of child: 1994



Source: Casper, Lynne M. 1997. "Who's Minding Our Preschoolers? Fall 1994 (Update)." Current Population Reports, PPL-81 (Tables B and 2). Washington, D.C.: U.S. Bureau of the Census.

ES 3.6

DETACHED YOUTH: PERCENTAGE OF 16- THROUGH 19-YEAR-OLDS NOT IN SCHOOL AND NOT WORKING

"Detached youth" refers to young people ages 16 through 19 who are neither enrolled in school nor working. This detachment, particularly if it lasts for several years, increases the risk that a young person, over time, will have lower earnings and a less stable employment history than his or her peers who stayed in school and/or secured jobs.[43]

Since 1985, the percentage of detached youth has fluctuated between 9 and 11 percent (see Table ES 3.6). In 1997, 9 percent of all youth ages 16 through 19 were detached.

Differences by Sex. Young women are more likely than young men to be detached from both school and employment. In 1997, 10 percent of young women but only 8 percent of young men experienced detachment.

Differences by Race and Hispanic Origin. Black and Hispanic youth are more likely than white youth to be detached from school and employment. In 1997, 14 percent of both black youth and Hispanic youth experienced detachment. The corresponding rate for white youth was 8 percent.

Differences by Age. Youth ages 16 or 17 are more likely than 18- or 19-year-olds to be in school or working. In 1997, 14 percent of 18- and 19-year-olds were detached, while only 4 percent of their younger peers were detached.

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[43] Brown, B. 1996. "Who Are America's Disconnected Youth?" Report prepared for the American Enterprise Institute.

Table ES 3.6

Percentage of 16- through 19-year-olds in the United States who are neither enrolled in school nor working,[a] by gender and by race and Hispanic origin[b] and by age:[c] selected years, 1985-1997

	1985	1990	1991	1992	1993	1994	1995	1996	1997
All youth	11	10	10	10	9	10	9	9	9
Gender									
Male	9	8	9	8	8	8	8	8	8
Female	13	12	13	12	11	11	11	11	10
Race and Hispanic origin[b]									
White	10	9	9	9	8	9	8	8	8
Black	18	15	17	17	15	14	15	14	14
Hispanic	17	17	16	16	16	17	16	16	14
Age group									
Ages 16-17	—	—	—	—	—	—	4	4	4
Ages 18-19	—	—	—	—	—	—	15	15	14

[a] The figures represent a yearly average based on responses for the nine months youth typically are in school (September through May). Youth are asked about their activities for the week prior to the survey.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks include persons of Hispanic origin.

[c] Results by age are from noncomposited estimates and are not comparable to data from published tables.

Source: Special tabulations of the Current Population Survey prepared by the Bureau of Labor Statistics, as published in America's Children: Key National Indicators of Well-Being, 1999. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table ED5.

ES 4.1

HOUSING PROBLEMS

Housing is a major expense for most families; however, spending more than 30 percent of income on housing may compromise the budget for other essential goods and services. A home's physical condition, its safety, the level of crowding in a household, and the quality of the surrounding neighborhood can all affect children's well-being.[44] This section presents recent trends in both the cost burden and the physical quality of housing for all households with children under age 18 and for renter households with children and very low income.

Cost Burden. The share of all households (containing children) spending more than 30 percent of their incomes on housing increased from 15 percent in 1978 to 28 percent in 1995, while the share spending more than half their income on housing doubled from 6 percent in 1978 to 12 percent in 1995 (see Table ES 4.1). For renter households with children and very low income[45] the trend was similar, but housing expenses were a much higher share of income. Between 1978 and 1995, the percentage of renter households (with children and very low income) paying more than 30 percent of their income on housing rose from 59 percent to 68 percent (with the entire increase occurring between 1978 and 1983), while the percentage spending more than 50 percent rose from 31 percent to 38 percent.

Physical Problems. During this same period, the percentage of households (containing children) living in housing with moderate to severe physical problems[46] declined from 9 percent in 1978 to 7 percent in 1995.[47] For renter households (with children and very low income), the percentage living in housing with moderate to severe physical problems declined from 18 percent in 1978 to 13 percent in 1995.

Differences by Type of Family. Married-couple families with children are the least likely to experience housing with physical problems, followed by households with one or no adult and households with two or more adults who are not married. In 1995, for example, 6 percent of married-couple households with children, 10 percent of households with one or no adult, and 10 percent of households with two or more unmarried adults lived in housing with moderate to severe physical problems (see Figure ES 4.1.A). Similarly, among all households with children, married couples are the least likely to be paying over 30 percent of their income on housing. For example, in 1995, 21 percent of married-couple households paid over 30 percent, compared with 51 percent of households with one or no adult and 34 percent of households with two or more unmarried adults (see Figure ES 4.1.B).

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[44] Moore, K., Zaslow, M.J., Coiro, M., Miller, S.M., and Magenheim, E. 1996. *The JOBS Evaluation: How Are They Faring? AFDC Families with Preschool-Aged Children in Atlanta at the Outset of the JOBS Evaluation.* Washington, D.C.: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation; Blackman, T., Evason, E., Melaugh, M., and Woods, R. 1989. "Housing and Health: A Case Study of Two Areas in West Belfast." *Journal of Social Policy* 18 (1): 1-26.

[45] Very low income households are those with incomes at or below one-half the median income in a geographic area.

[46] Physical problems include plumbing, heating, electricity, upkeep, and/or hallways. For detailed definitions of "moderate" and "severe" physical problems, see U.S. Bureau of the Census and U.S. Department of Housing and Urban Development, 1997, *Current Housing Reports H150/95RV*, "American Housing Survey for the United States in 1995," Washington, D.C., pp. A-13 and A-14.

[47] This apparently downward trend may not be statistically significant.

Table ES 4.1

Percentage of households with children under age 18 in the United States having selected housing problems,[a] all households and very low income[b] renter households: selected years, 1978-1995

	1978	1983	1989	1993	1995
Household type					
All households with children					
Number of households (in thousands)	32,267	33,584	35,735	35,462	37,264
Percentage with					
Any problems	30	33	33	34	36
Moderate or severe physical problems	9	8	9	7	7
Crowded housing	9	8	7	6	7
Cost burden greater than 30 percent	15	21	24	27	28
Cost burden greater than 50 percent	6	11	9	11	12
Severe problems	8	12	10	11	12
Renter households with children and very low income					
Number of households (in thousands)	4,176	5,091	5,892	6,653	6,508
Percentage with					
Any problems	79	83	76	75	77
Moderate or severe physical problems	18	18	18	14	13
Crowded housing	22	18	17	14	17
Cost burden greater than 30 percent	59	68	67	67	68
Cost burden greater than 50 percent	31	38	36	38	38
Severe problems	33	42	33	34	32
Rental assistance	23	23	29	28	29

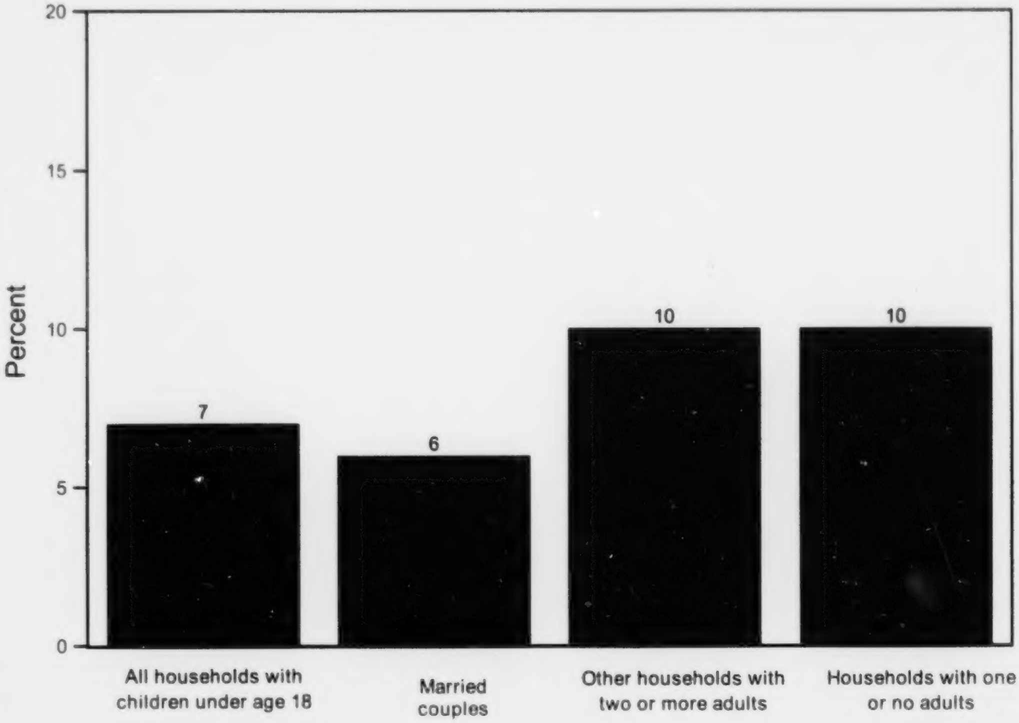
[a] Housing problems include physical problems, excessive cost burden, and overcrowding. "Crowded" is defined as having more than one person per room. Physical problems include plumbing, heating, electricity, upkeep, and/or condition of apartment hallways. For detailed definitions of "moderate" and "severe" physical problems, see U.S. Bureau of the Census and U.S. Department of Housing and Urban Development (1997), Current Housing Reports H150/95RV, "American Housing Survey for the United States in 1995," Washington, D.C., pp. A-13 and A-14. Cost burden is the ratio of housing costs to reported household income.

[b] Very low income households are those with incomes at or below one-half the median income in a geographic area.

Source: U.S. Department of Housing and Urban Development, tabulations of data from the American Housing Survey for the United States as published in America's Children: Key National Indicators of Well-Being, 1998. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office. Table ECON3.

Figure ES 4.1.A

Percentage of households with children under age 18 in the United States living in housing with moderate to severe physical problems:[a] 1995

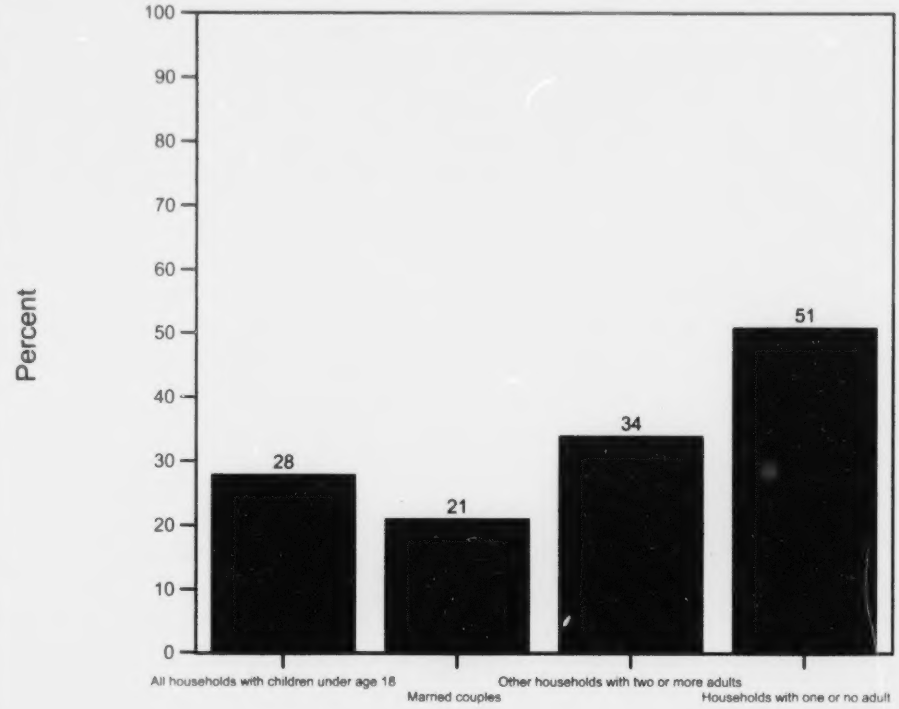


[a] Physical problems include plumbing, heating, electricity, upkeep, and/or condition of apartment hallways. For detailed definitions of "moderate" and "severe" physical problems, see U.S. Bureau of the Census and U.S. Department of Housing and Urban Development (1997), Current Housing Reports H150/95RV, "American Housing Survey for the United States in 1995," Washington, D.C., pp. A-13 and A-14.

Source: U.S. Department of Housing and Urban Development, unpublished tabulations of data from the American Housing Survey for the United States, 1995.

Figure ES 4.1.B

Percentage of households containing children under age 18 and paying over 30 percent of their income on housing: 1995



Source: U.S. Department of Housing and Urban Development, unpublished tabulations of data from the American Housing Survey for the United States, 1995.

ES 4.2
FOOD SECURITY[48]

Children's good health and development depend on a diet sufficient in nutrients and calories. Food security has been defined as access at all times to enough nourishment for an active, healthy life. At a minimum, food security includes the ready availability of sufficient, nutritionally adequate and safe food, and the assurance that families can obtain adequate food without relying on emergency feeding programs or resorting to scavenging, stealing, or other desperate efforts to secure food.[49] A family's ability to provide for children's nutritional needs is linked to income or other resources and secure access to adequate, nutritious food.

Members of food-insecure households are at risk of hunger, that is, the uneasy or painful sensation caused by a lack of food. The following indicator measures food insecurity on a scale that indicates increasing levels of severity of food insecurity and accompanying hunger. Food-insecure households without hunger report having difficulty obtaining enough food, reduced quality of diets, anxiety about their food supply, and increased resort to emergency food sources and other coping behaviors, but do not report hunger to a significant degree. However, food-insecure households with moderate and severe hunger report increasing difficulty obtaining food and decreased food intakes.[50]

- The percentage of children living in households experiencing food insecurity has remained fairly stable since 1995. In 1995, 12.8 percent of children lived in households experiencing food insecurity. This rose slightly to 13.0 percent in 1996 and then decreased to 11.3 percent in 1997. This stability is also evident for children in homes with incomes below the federal poverty level and for children in homes with incomes at or above the poverty level (see Table ES 4.2).
- In 1997, 4.2 percent of children lived in households experiencing food insecurity with moderate or severe hunger; 3.5 percent experienced food insecurity with moderate hunger and 0.7 percent experienced severe hunger (see Figure ES 4.2 and Table ES 4.2).
- Poor children are much more likely than others to live in households experiencing food insecurity with moderate to severe hunger. In 1997, 11.1 percent of children in homes with incomes below the federal poverty level lived in households experiencing food insecurity with moderate to severe hunger, compared to 2.1 percent of children in non-poor households.
- Most food-insecure households do not report actual hunger for household members. In 1997, 11.3 percent of all children and 26.8 percent of poor children lived in households experiencing food insecurity without hunger evident.
- The number of children who actually experience hunger themselves, even though they may live in a food-insecure household where one or more family members experience hunger, is believed to be significantly smaller than the total number of children living in such households. This is because in most such households the adults go without food, if necessary, so that the children will have food.

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[48] We wish to thank the Food and Nutrition Service, U.S. Department of Agriculture, for providing a draft of the text as well as the statistics used in this section.

[49] Life Sciences Research Office and American Institute of Nutrition. 1990. *Core Indicators of Nutritional State for Difficult to Sample Populations.* Bethesda, Md.: Life Sciences Research Office and American Institute of Nutrition.

[50] See the note to Table ES 4.2 for a description of the Food Security Supplement to the Current Population Survey and for details on the food security scale.

Table ES 4.2

Percentage of children under age 18 in the United States living in households experiencing food insecurity, by severity and poverty status: 1995-1997

Poverty level	1995	1996	1997
All children			
Food insecure without hunger	12.8	13.0	11.3
Food insecure with moderate or severe hunger	6.2	6.2	4.2
Food insecure with moderate hunger	5.2	5.2	3.5
Food insecure with severe hunger	1.0	1.0	0.7
Children below poverty line			
Food insecure without hunger	26.6	28.7	26.8
Food insecure with moderate or severe hunger	15.7	17.4	11.1
Food insecure with moderate hunger	12.8	13.9	9.2
Food insecure with severe hunger	2.9	3.5	1.9
Children at or above poverty line			
Food insecure without hunger	7.9	8.5	6.7
Food insecure with moderate or severe hunger	3.0	3.1	2.1
Food insecure with moderate hunger	2.6	2.8	1.8
Food insecure with severe hunger	0.4	0.3	0.3

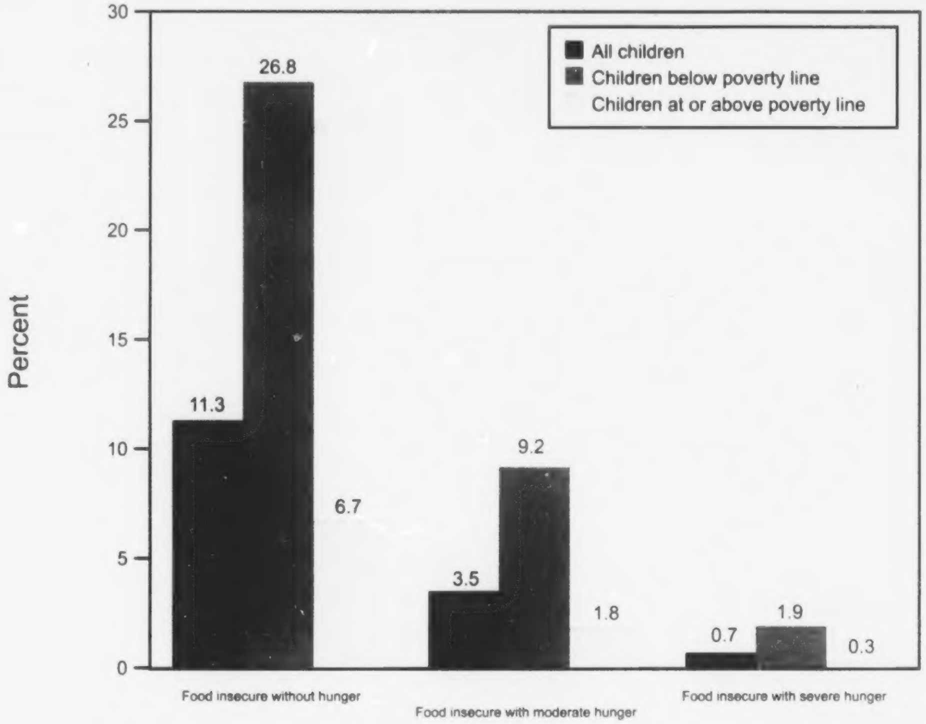
Note: The Food Security Supplement is a new survey instrument developed through a long and rigorous process. The content of the survey is based on material reported in prior research on hunger and food insecurity and subjected to extensive testing by the U.S. Bureau of the Census. It was developed through the consensus of nearly 100 experts convened at the 1994 Food Security Measurement and Research Conference convened jointly by the National Center for Health Statistics of the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services and the Food and Nutrition Service of the U.S. Department of Agriculture. The survey was further developed, tested, and refined in the next year by conferees, members of a federal interagency working group, and survey method specialists from the Census Bureau's Center for Survey Method Research. The survey contains a systematic set of questions intended to identify levels of food insecurity on both a 12-month and a 30-day basis. Data presented in this report are 12-month data. Approximately 53,700 households completed the April 1995 basic CPS questionnaire and were invited to answer the Food Security Supplement. Of these, 44,730 households completed the supplement, implying a noninterview rate of 16.7 percent below the basic CPS sample. The respondents completing the supplement included households at all income levels, both above and below the federal poverty thresholds. Special weights were computed to adjust the final supplement sample for the demographic characteristics of supplement noninterviews.

The food security scale provides a near-continuous measure of the level of food insecurity and hunger experienced within each household. A categorical measure based on the scale classifies households according to four designated levels of household food security: food-secure, food-insecure without hunger, food-insecure with moderate hunger, and food-insecure with severe hunger. Food-secure households are households that do not report a significant number of instances of difficulty obtaining enough quality food. Food-insecure households without hunger report having difficulty obtaining enough food, reduced quality of diets, anxiety about their food supply, and increasing resort to emergency food sources and other coping behaviors, but do not report hunger to a significant degree. Food-insecure households with moderate hunger report food insecurity and significant instances of hunger for one or more adults and, in some cases, for children. Food-insecure households with severe hunger report food insecurity and significant instances of hunger for adults and children. For a detailed explanation of the new USDA/DHHS Food Security Measurement scale, see Household Food Security in the United States in 1995 (USDA, Food and Nutrition Service, 1997).

Source: Food Security Supplement to the April 1995, September 1996, and April 1997 Current Population Survey, as published in America's Children: Key National Indicators of Well-Being, 1999. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table ECON4.A.

Figure ES 4.2

Percentage of children under age 18 in the United States living in households experiencing food insecurity, by severity and poverty status: 1997



Source: Food Security Supplement to the April 1997 Current Population Survey, as published in America's Children: Key National Indicators of Well-Being, 1999. Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table ECON4.A.

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Health Conditions and Health Care

(HC)

HC 1.1
INFANT MORTALITY

Infancy is commonly divided into the neonatal period, the first 27 days of life, and the postneonatal period, 28 days to less than one year. About two-thirds of infant deaths occur during the neonatal period (although advances in neonatology in recent decades have greatly improved the chances that infants will survive this period). The three leading causes of death to infants (one year and younger) are congenital anomalies, disorders relating to a short gestation period and low birth weight, and sudden infant death syndrome (SIDS).[1] In 1994, SIDS dropped from the second to the third leading cause of infant mortality. The SIDS decline accounted for nearly one-third of the total drop in infant mortality in 1995 and 1996.[2] Infant deaths due to SIDS have been declining since 1989.[3]

The U.S. infant mortality rate has decreased rapidly over the past three decades, largely due to medical developments over this time. Between 1960 and 1997, the rate fell from 26.0 to 7.2 infant deaths per thousand live births (see Figure HC 1.1.A). There was a steep decline in the rate of neonatal deaths (from 18.7 to 4.8 infant deaths per thousand live births) and a smaller, more gradual decline in the rate of postneonatal deaths (from 7.3 to 2.5 infant deaths per thousand live births)[4].

International Comparisons. Despite declines in recent decades, the U.S. infant mortality rate ranks among the highest of industrialized nations. For example, in 1994, the rate of infant deaths per thousand live births was 4.3 in Japan, 5.6 in Germany, 6.2 in England and Wales, and 6.5 in France, compared with 8.0 deaths per thousand live births in the United States.[5] The Russian Federation, in contrast, had an infant mortality rate of 18.6 deaths per thousand live births in 1994.

Differences by Race and Hispanic Origin. While infant mortality rates have declined for all races and ethnic groups in the United States, there is, nevertheless, considerable variation by race and Hispanic origin (see Figure HC 1.1.B). Specifically:

- For white infants, the infant mortality rate declined by 74 percent between 1960 and 1997—from 22.9 to 6.0 deaths per thousand live births (see Table HC 1.1.A).
- For black infants, the infant mortality rate declined from 44.3 to 14.2 deaths per thousand live births (see Table HC 1.1.A).
- For Hispanic infants, the infant mortality rate declined from 8.6 to 6.0 deaths per thousand live births between 1985 and 1997 (see Table HC 1.1.A).
- For Asian/Pacific Islander infants, the infant mortality rate declined by 40 percent from an average of 8.3 deaths per thousand live births during the period 1983-1985 to 5.0 deaths per thousand live births in 1997 (see Table HC 1.1.B).[6]
- For American Indian/Alaska Native infants, the infant mortality rate declined by 37 percent from an average of 13.9 deaths per thousand live births during the period 1983-1985 to 8.7deaths per thousand live births in 1997 (see Table HC 1.1.B).

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[1] Hoyert DL, Kochanek KD, Murphy SL. "Deaths: Final Data for 1997." *National Vital Statistics Report* 47 (19). Hyattsville, Md.: National Center for Health Statistics. 1999.

[2] Singh, G.K., Kochanek, K.D., and MacDorman, M.F. 1994. "Advance Report of Final Mortality Statistics, 1994." *Monthly Vital Statistics Report* 45 (3 Supp.). Hyattsville, Md.: National Center for Health Statistics.

[3] Ibid.

[4] Hoyert DL, Kochanek KD, Murphy SL. "Deaths: Final Data for 1997." *National Vital Statistics Report* 47 (19). Hyattsville, Md.: National Center for Health Statistics. 1999.

[5] National Center for Health Statistics. 1999. *Health, United States, 1999.* Hyattsville, Md.

[6] Infant mortality data for Asians/Pacific Islanders and American Indians/Alaska Natives are presented from the National Linked Files of Live Births and Infant Deaths in Table HC 1.1.B. Rather than relying solely on death certificates data, which may underestimate mortality for infants of Hispanic origin or of races other than white and black, data from the National Linked Files of Live Births and Infant Deaths use race from birth certificates and, therefore, provide more accurate data for these populations. The National Linked Files of Live Births and Infant Deaths data are available for 1983-1991 and 1995-1996, when they began being produced on a regular basis again.

Table HC 1.1.A

Infant, neonatal, and postneonatal mortality rates (deaths per 1,000 live births) in the United States, by race and Hispanic origin:[a] selected years, 1960-1997

	1960[b,c]	1970	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Infant[d]	26.0	20.0	12.6	10.6	9.2	8.9	8.5	8.4	8.0	7.6	7.3	7.2
White	22.9	17.6	10.9	9.2	7.6	7.3	6.9	6.8	6.6	6.3	6.1	6.0
Black	44.3	33.3	22.2	19.0	18.0	17.6	16.8	16.5	15.8	15.1	14.7	14.2
Hispanic	—	—	—	8.6	7.8	7.5	6.8	6.7	6.5	6.1	5.9	6.0
Neonatal[e]	18.7	15.1	8.5	7.0	5.8	5.6	5.4	5.3	5.1	4.9	4.8	4.8
White	17.2	13.7	7.4	6.0	4.8	4.5	4.3	4.3	4.2	4.1	4.0	4.0
Black	27.8	23.2	14.6	12.6	11.6	11.2	10.8	10.7	10.2	9.8	9.6	9.4
Hispanic	—	—	—	5.4	5.0	4.6	4.3	4.1	4.1	4.0	3.8	3.9
Postneonatal[f]	7.3	4.9	4.1	3.7	3.4	3.4	3.1	3.1	2.9	2.7	2.5	2.5
White	5.7	4.0	3.5	3.2	2.8	2.8	2.6	2.5	2.4	2.2	2.1	2.0
Black	16.5	10.1	7.6	6.4	6.4	6.3	6.0	5.8	5.6	5.3	5.1	4.8
Hispanic	—	—	—	3.2	2.8	2.8	2.5	2.6	2.5	2.1	2.1	2.0

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race. Hispanic rates not available prior to 1985. Infant mortality by Hispanic origin reported by 17 states and the District of Columbia in 1985; 45 states, New York State (excluding New York City), and the District of Columbia in 1990; 47 states, New York State (excluding New York City), and the District of Columbia in 1991; 48 states and the District of Columbia in 1992; 49 states and the District of Columbia from 1993 to 1996; and all 50 states and the District of Columbia in 1997.

[b] Includes births and deaths of persons who were not residents of the 50 states and the District of Columbia.

[c] Data for 1960 are by race of child; all other years are by race of mother.

[d] Under one year old.

[e] Under 28 days old.

[f] Twenty-eight days to one year old.

Sources: Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Tables 25 and 26. Hyattsville, Md.: National Center for Health Statistics, 1997. Also previous issues of this annual report [Table 26 in 41 (7, Supp.), Table 25 in 42 (2, Supp.), Table 28 in 43 (6, Supp.), Table 32 in 44 (7, Supp.), and Table 25 in 45 (3, Supp.)]. 1970 data from the National Center for Health Statistics. 1996. *Vital Statistics of the United States, 1991.* Vol. II, Mortality, Part A. Washington, D.C.: Public Health Service, (Table 2-2). National Center for Health Statistics. 1988. *Vital Statistics of the United States, 1985,* Vol. II, Mortality, Part A. Washington, D.C.: U.S. Government Printing Office, (Table 2-19). *National Vital Statistics Report* 47 (4), Table 14. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9), Table 26.

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Table HC 1.1.B

Infant mortality rates (deaths per 1,000 live births) in the United States, by detailed race[a] and Hispanic origin:[b] selected years, 1983-1997

	1983-1985	1986-1988	1989-1991	1995	1996	1997
Infant (all races)	10.6	9.8	9.0	7.6	7.3	7.2
White	9.0	8.2	7.4	6.3	6.1	6.0
Black	18.7	17.9	17.1	14.6	14.1	13.7
American Indian/Alaska Native	13.9	13.2	12.6	9.0	10.0	8.7
Asian/Pacific Islander	8.3	7.3	6.6	5.3	5.2	5.0
Chinese	7.4	5.8	5.1	3.8	3.2	3.1
Japanese	6.0	6.9	5.3	5.3	4.2	5.3
Filipino	8.2	6.9	6.4	5.6	5.8	5.8
Hawaiian and part Hawaiian	11.3	11.1	9.0	6.6	5.6	9.0
Other Asian or Pacific Islander	8.6	7.6	7.0	5.5	5.7	5.0
Hispanic	9.2	8.3	7.6	6.3	6.1	6.0
Mexican American	8.8	7.9	7.2	6.0	5.8	5.8
Puerto Rican	12.3	11.1	10.4	8.9	8.6	7.9
Cuban	8.0	7.3	6.2	5.3	5.1	5.5
Central and South American	8.2	7.6	6.6	5.5	5.0	5.5
Other and unknown Hispanic	9.9	9.0	8.2	7.4	7.7	6.2

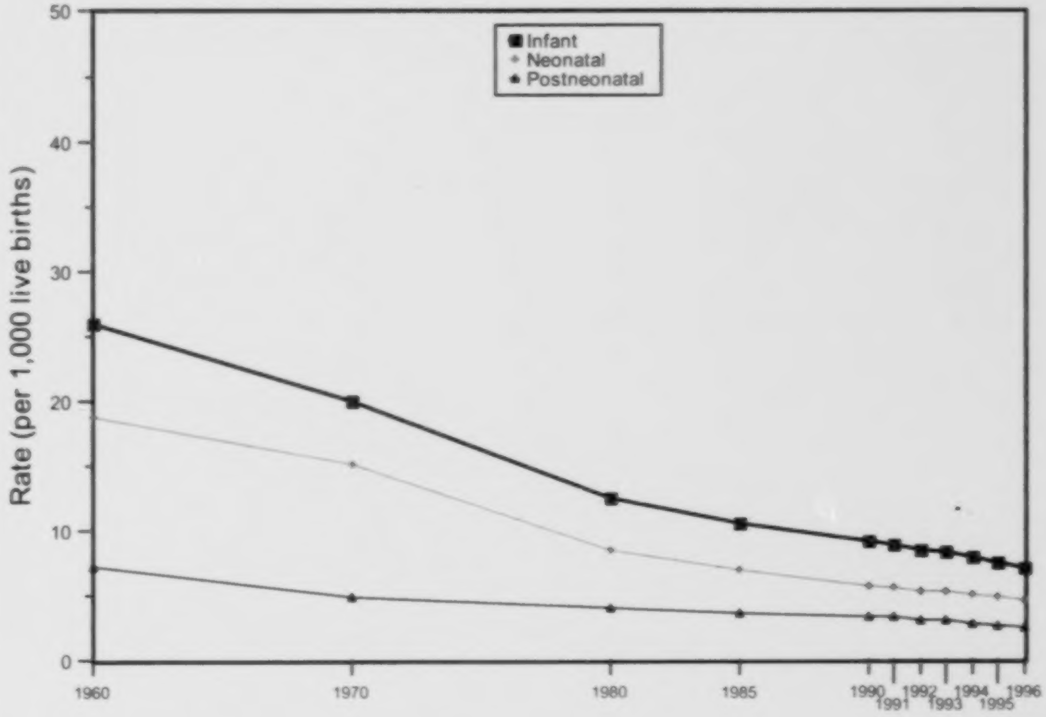
[a] Estimates are based on specified race or national origin of mother.

[b] Estimates for separate race groups include Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data from the National Linked Files of Live Births and Infant Deaths. *Health, United States, 1996-97*, Table 20. MacDorman, M.F., and Atkinson, J.O. 1998. "Infant Mortality Statistics from the 1996 Linked Birth/Infant Death Data Set." *Monthly Vital Statistics Report* 46 (12, Supp.). Hyattsville, Md.: National Center for Health Statistics, Tables A and C. MacDorman, M.F., and Atkinson, J.O. "Infant Mortality Statistics from the Linked Birth/Infant Death Data Set: 1995 Period Data."*Monthly Vital Statistics Report* 46 (6, Supp. 2). Hyattsville, Md.: National Center for Health Statistics, Tables A and C. MacDorman, M.F., and Atkinson, J.O. 1999. "Infant Mortality Statistics from the 1997 Linked Birth/Infant Death Dataset." *National Vital Statistics Report* 47(23). Hyattsville, Md.: National Center for Health Statistics, Tables A and C.

Figure HC 1.1.A

Infant, neonatal, and postneonatal mortality rates (deaths per 1,000 live births) in the United States: selected years, 1960[a]-1996



[a] Includes births and deaths of persons who were not residents of the 50 states and the District of Columbia.

Sources: Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Tables 25 and 26. Hyattsville, Md.: National Center for Health Statistics. Also previous issues of this annual report [Table 26 in 41 (7, Supp.), Table 25 in 42 (2, Supp.), Table 28 in 43 (6, Supp.), Table 32 in 44 (7, Supp.), and Table 25 in 45 (3, Supp.)]. 1970 data from the National Center for Health Statistics. 1996. *Vital Statistics of the United States, 1991.* Vol. II, Mortality, Part A. Washington, D.C.: Public Health Service, (table 2-2). National Center for Health Statistics. 1988. *Vital Statistics of the United States, 1985*, Vol. II, Mortality, Part A. Washington, D.C.: U.S. Government Printing Office. (Table 2-19). *National Vital Statistics Report* 47 (4), Table 14.

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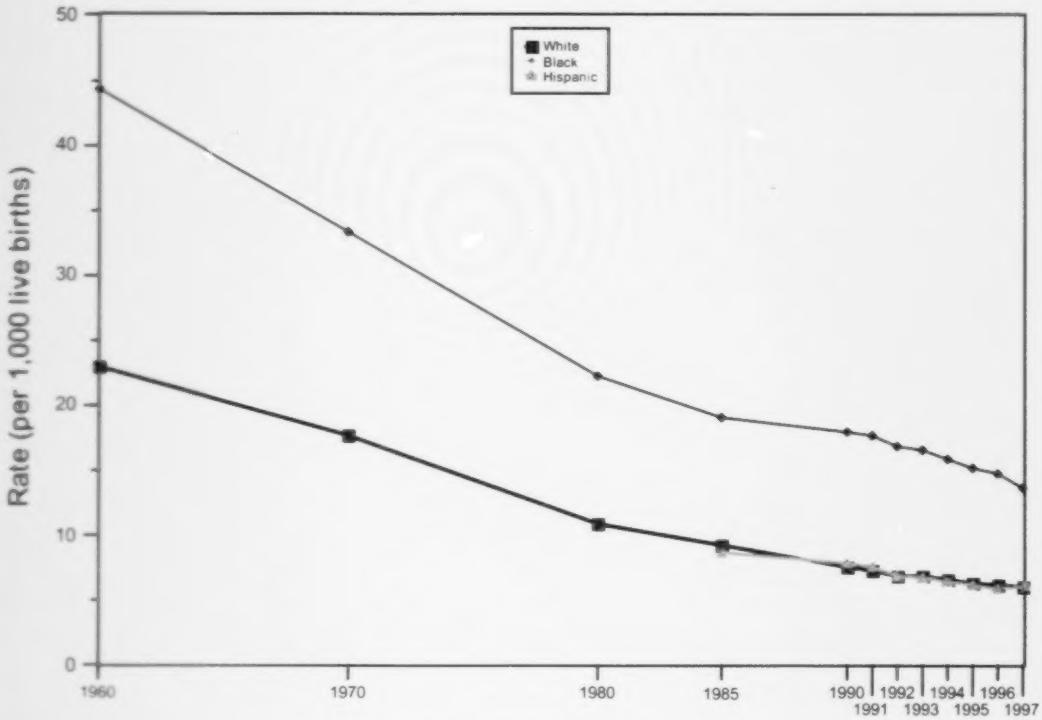
Figure HC 1.1.B

Infant mortality rates (deaths per 1,000 live births) in the United States, by race and Hispanic origin:[a] selected years, 1960[b,c]-1997[d]



[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race. Hispanic rates not available prior to 1985. Infant mortality by Hispanic origin reported by 17 states and the District of Columbia in 1985; 45 states, New York State (excluding New York City), and the District of Columbia in 1990; 47 states, New York State (excluding New York City), and the District of Columbia in 1991; 48 states and the District of Columbia in 1992; 49 states and the District of Columbia from 1993 to 1996; and all 50 states and the District of Columbia in 1997.

[b] Includes births and deaths of persons who were not residents of the 50 states and the District of Columbia.

[c] Data for 1960 are by race of child; all other years are by race of mother.

[d] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Sources: Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Tables 25 and 26. Hyattsville, Md.: National Center for Health Statistics, Also previous issues of this annual report [Table 26 in 41 (7, Supp.), Table 25 in 42 (2, Supp.), Table 28 in 43 (6, Supp.), Table 32 in 44 (7, Supp.), and Table 25 in 45 (3, Supp.)]. 1970 data from the National Center for Health Statistics. 1996. *Vital Statistics of the United States, 1991.* Vol. II, Mortality, Part A. Washington, D.C.: Public Health Service, (table 2-2). National Center for Health Statistics. 1988. *Vital Statistics of the United States, 1985,* Vol. II, Mortality, Part A. Washington, D.C.: U.S. Government Printing Office, 1988, (Table 2-19). *National Vital Statistics Report* 47 (4), Table 14. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9), Table 26.

HC 1.2

CHILD AND YOUTH DEATHS

Injuries are a common cause of death for children of all ages.[7] Among children ages 1 to 4, unintentional injuries were the leading cause of death, followed by congenital anomalies, malignant neoplasms, homicide and legal intervention, and diseases of the heart.[7] In 1996, all injuries, including homicides and suicides, accounted for 52 percent of deaths to children ages 5 through 14 and for 80 percent of deaths to youth ages 15 through 19.[9,10]

Overall, child death rates have decreased substantially over the past several decades (see Table HC 1.2.A). In 1997, death rates per 100,000 were 35.8 for 1- through 4-year-olds, 18.5 for 5- through 9-year-olds, 23.2 for 10- through 14-year-olds, and 74.8 for 15- through 19-year-olds.

Differences by Age. The most dramatic declines in death rates occurred among children under age 15, with decreases of 67 percent among children ages 1 to 4, 62 percent among children ages 5 to 9, and 48 percent among children ages 10 through 14 since 1960 (see Figure HC 1.2.A). Most of the decline in the death rate for these groups occurred between 1960 and 1990. In contrast, death rates for youth ages 15 through 19 have decreased by only 21 percent since 1960. Moreover, unlike the fairly steady declines among the younger age groups, the death rate for this age group has had a variable pattern over the last 30 years (see Figure HC 1.2.A).

Differences by Race and Hispanic Origin. Multi-year data from the National Center for Health Statistics are used to examine the differences in the death rate of children and youth for several racial and ethnic groups across three time periods spanning from 1989 through 1996 (see Table HC 1.2.B). For children ages 1 to 14 and youth ages 15 to 24, black children and youth have the highest death rate, followed by American Indian/Alaska Native, Hispanic, and white children and youth. Asian children and youth consistently have the lowest death rates.

The death rate for children ages 1 to 14 decreased modestly for all racial and ethnic groups except American Indian/Alaska Native children over the three periods. Trends in the death rate for youth ages 15 to 24 were more mixed, decreasing for white and American Indian/Alaska Native youth and increasing for black, Hispanic, and Asian youth between the first two periods, and declining for all groups between 1992-1993 and 1994-1996. Overall, white and American Indian/Alaska Native youth experienced the largest decreases over the three periods for the 15- to 24-year-old age group.

Differences by Race for Younger Children. Data for earlier decades are available only for black and white children (see Table HC 1.2.A). These data show substantial differences between white and black children since at least 1970 for children ages 1 through 4, 5 through 9, and 10 through 14. In 1997, the death rate was 48 percent higher for black children ages 10 through 14 than for white children in that age group, 88 percent higher for children ages 5 though 9, and 86 percent higher for children ages 1 through 4.

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[7] Injury-related deaths include deaths from motor vehicle crashes, fires and burns, drowning, suffocation, and accidents caused by firearms and other explosive materials, as well as homicides, suicides, and other external causes of death. See Fingerhut, L.A., Annest J.L., Baker, S.P., Kochanek, K.D., and McLoughlin, E. 1996. "Injury Mortality among Children and Teenagers in the United States, 1993." *Injury Prevention* 2: 93-94.

[8] Kochanek, K.D., and Murphy, S.L. "Deaths: Final Data for 1997." *National Vital Statistics Report* 47(19). Hyattsville, Md.: National Center for Health Statistics. 1999.

[9] Percentages calculated by Child Trends based on data on the number of deaths from all causes and from injuries. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9). Hyattsville, Md.: National Center for Health Statistics, Table 2; National Center for Injury Control and Prevention, Centers for Disease Control. "1996 United States Deaths and Rates per 100,000: All Injury," available online at http://www.cdc.gov/ncipc/osp/states/0001.htm, and http://www.cdc.gov/nchs/about/major/dvs/mortdata.htm.

[10] Discussion and data regarding motor vehicle crashes, the largest category of accident-related death for 15- to 19-year-olds, follows in the next section (HC 1.3).

Differences by Race for Adolescents. The black-white disparity among adolescents ages 15 through 19 was substantial in 1970 but had declined by 1980 to the point where black youth registered lower death rates than white youth (see Figure HC 1.2.B). This reversal was short-lived, however. Black death rates surged from 85.2 per 100,000 in 1985 to 145.0 per 100,000 by 1994, while white death rates remained fairly stable. Much of this increase in black teen deaths reflected a substantial increase in black teen male homicide rates, which are reviewed in Section HC 1.4 of this report. Recently, the difference between the white and black adolescent death rates has narrowed as the rate for blacks declined 27 percent between 1994 and 1997.

Differences by Gender. Male child death rates are higher than female rates for all age groups, but the differences are far more pronounced for the older age groups, for whom injury-related deaths disproportionately affect males (see Table HC 1.2.A).[11]

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[11] Sections HC 1.3 through HC 1.5 further highlight the differences in death rates between males and females ages 15-19 for violent and injury-related deaths.

Table HC 1.2.A

Child and youth death rates (death rates per 100,000 population in each age group) in the United States, by age group, gender, and race: selected years, 1960-1997

	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Ages 1-4														
All children	109.1	95.9	84.5	69.9	63.9	51.8	46.8	47.4	43.6	44.8	42.9	40.6	38.3	35.8
Gender														
Male	119.5	104.3	93.2	76.7	72.6	58.5	52.4	52.0	48.0	49.5	47.3	44.8	42.2	39.7
Female	98.4	87.1	75.4	62.7	54.7	44.8	41.0	42.7	39.0	39.9	38.2	36.2	34.3	31.8
Race														
White	95.2	83.2	75.1	63.3	57.9	46.6	41.1	41.7	38.1	38.3	36.5	35.1	32.9	31.6
Black	—	—	140.0	106.2	97.6	80.7	76.8	79.7	73.2	79.1	77.2	70.3	67.6	59.2
Ages 5-9														
All children	49.0	43.9	42.1	35.2	30.4	25.0	22.2	21.5	20.4	21.1	19.9	19.7	19.4	18.5
Gender														
Male	56.3	50.8	49.7	41.4	35.0	28.5	25.6	24.5	23.7	23.2	22.6	22.5	22.1	20.2
Female	41.5	36.8	34.2	28.6	25.6	21.4	18.5	18.4	16.8	19.0	17.0	16.7	16.7	16.6
Race														
White	46.2	40.8	39.9	33.0	28.4	22.9	20.3	19.8	18.3	19.0	17.6	17.7	17.5	16.2
Black	—	—	56.4	47.4	41.7	36.2	32.3	32.0	32.1	32.9	31.8	30.2	30.2	30.1
Ages 10-14														
All children	44.0	40.5	40.6	35.3	30.8	28.0	26.0	25.8	24.6	25.6	25.2	25.5	24.0	23.2
Gender														
Male	55.0	50.9	51.3	44.9	38.3	35.0	31.6	32.9	30.7	31.7	31.2	31.0	28.8	27.9
Female	32.6	29.7	29.5	25.3	22.9	20.6	20.2	18.2	18.2	19.2	18.8	19.6	18.9	18.3
Race														
White	41.4	38.6	38.4	33.7	29.8	27.0	24.3	24.2	22.8	23.7	23.0	23.6	22.2	21.8
Black	—	—	54.6	44.3	36.6	34.8	36.6	36.4	35.3	37.2	37.9	36.8	34.1	32.1
Ages 15-19														
All children	92.2	95.3	110.3	100.2	97.9	80.5	87.9	89.0	84.3	86.9	86.8	83.5	78.6	74.8
Gender														
Male	130.1	136.0	157.8	145.4	141.4	113.4	127.2	128.6	122.4	126.0	126.6	119.5	111.0	104.5
Female	54.0	53.9	61.7	53.8	53.1	46.2	46.4	47.2	44.0	45.6	44.8	45.7	44.0	43.4
Race														
White	87.9	90.9	103.1	98.0	99.1	80.2	81.4	80.5	75.6	77.0	76.8	75.6	71.6	69.5
Black	—	—	158.0	114.4	92.3	85.2	127.7	141.2	135.5	143.6	145.0	130.2	120.2	107.6

Sources: Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9). Hyattsville, Md.: National Center for Health Statistics, Table 2; Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Table 2. Hyattsville, Md.: National Center for Health Statistics. Also previous issues of this annual report [Table 2 in 44 (7, Supp.)] and unpublished data provided by the Mortality Statistics Branch, National Center for Health Statistics.

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Table HC 1.2.B

Child and youth death rates (per 100,000 population in each age group) in the United States, by age group, gender, and race and Hispanic origin: 1989-1996

	Combined Years 1989-1991			Combined Years 1992-1993			Combined Years 1994-1996		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Ages 1-14									
All races	31.4	36.2	26.3	29.3	33.7	24.6	27.6	31.7	23.3
White[a]	28.4	32.8	23.8	26.1	30.3	21.7	24.5	28.3	20.6
Black[a]	48.3	56.1	40.3	47.1	53.4	40.7	44.7	51.2	38.0
Asian/Pacific Islander[a]	22.7	25.3	20.0	20.3	23.1	17.4	18.7	21.3	16.0
American Indian/ Alaska Native[a]	37.3	45.1	29.2	38.9	47.0	30.6	40.0	45.1	34.8
Hispanic origin[b]	30.2	34.7	25.5	28.4	32.4	24.2	25.6	29.6	21.4
Ages 15-24									
All races	99.1	146.1	50.0	97.0	144.0	47.9	94.3	139.0	47.5
White[a]	89.3	129.5	47.0	84.2	122.3	44.1	83.0	120.2	43.8
Black[a]	161.9	254.9	69.8	174.8	279.5	70.6	161.5	253.3	69.7
Asian/Pacific Islander[a]	50.1	70.8	28.1	56.1	80.1	31.1	55.6	79.0	31.9
American Indian/ Alaska Native[a]	142.0	208.3	71.1	129.4	184.2	71.4	127.2	188.5	63.6
Hispanic origin[b]	103.3	156.5	40.9	107.5	167.3	40.2	102.1	158.1	39.9

[a] Includes persons of Hispanic origin.

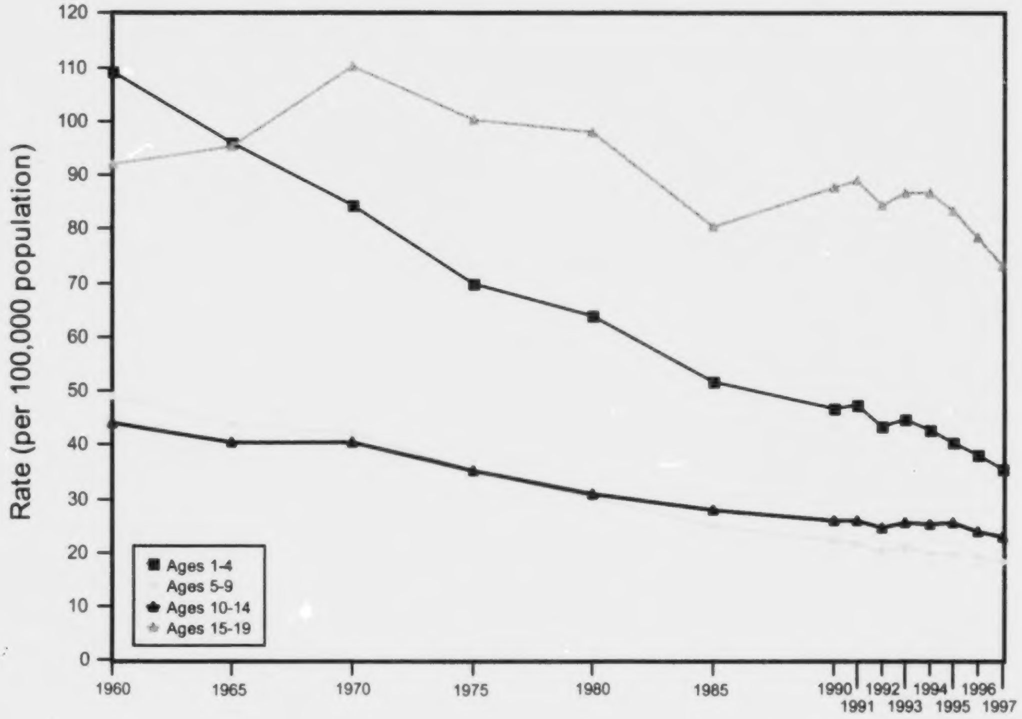
[b] Persons of Hispanic origin may be of any race. Death figures for Hispanic persons are based on data from 44 states and the District of Columbia that reported Hispanic origin on the death certificate in 1989, 47 states and the District of Columbia in 1990, 48 states and the District of Columbia in 1991 and 1992, and 49 states and the District of Columbia in 1993-1996.

Note: Death rates reported for white and black persons are based on highly consistent information. However, persons identified as American Indian, Asian, or Hispanic origin in the data from the Census Bureau (denominator of death rates) are sometimes misreported as white or non-Hispanic on the death certificate (numerator), resulting in underestimates of about 22 percent to 30 percent for death rates of American Indians, about 12 percent for death rates of Asians, and about 7 percent for persons of Hispanic origin. (National Center for Health Statistics, *Health, United States, 1993*, Table 33; Sorlie, P.D., Rogot E., and Johnson, N.J. 1992. "Validity of Demographic Characteristics on the Death Certificate." *Epidemiology* 3(2): 181-184.)

Sources: Rosenberg HM, Maurer JD, Sorlie PD, Johnson NJ, et al. Quality of death rates by race and Hispanic origin: A summary of current research, 1999. National Center for Health Statistics. Vital Health Stat 2(128). 1999. Centers for Disease Control and Prevention, National Center for Health Statistics. Data computed by the Division of Analysis from data compiled by the Division of Vital Statistics and from national population estimates for race groups. Also, data computed by Infant and Child Health Studies Branch, National Center for Health Statistics, from mortality data compiled by Division of Vital Statistics. National Center for Health Statistics. 1994. *Health, United States, 1993*, Table 32. Hyattsville, Md.: Public Health Service.

Figure HC 1.2.A

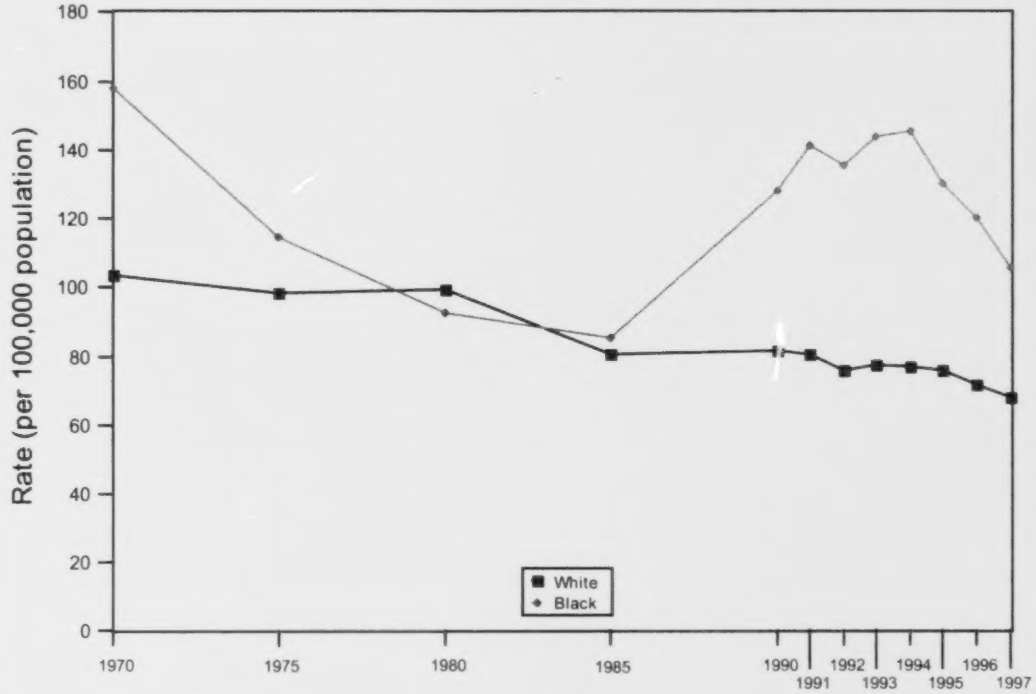
Child and youth death rates (per 100,000 population in each age group) in the United States, by age group: selected years, 1960-1997



Sources: Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Table 2. Hyattsville, Md.: National Center for Health Statistics. Also previous issues of this annual report [Table 2 in 44 (7, Supp.)] and unpublished data provided by the Mortality Statistics Branch, National Center for Health Statistics.

Figure HC 1.2.B

Youth death rates (per 100,000 population in age group) in the United States for ages 15 through 19, by race: selected years, 1970-1997



Sources: Hoyert DL, Kochanek KD, Murphy SL. "Deaths: Final Data for 1997." *National Vital Statistics Reports* 47(19). Hyattsville, Md.: National Center for Health Statistics, 1999. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. "Deaths: Final Data for 1996." *National Vital Statistics Report* 47 (9). Hyattsville, Md.: National Center for Health Statistics, Table 2; Anderson, R.N., Kochanek, K.D., and Murphy, S.L. 1997. "Report of Final Mortality Statistics, 1995." *Monthly Vital Statistics Report* 45 (11, Supp. 2), Table 2. Hyattsville, Md.: National Center for Health Statistics. Also previous issues of this annual report [Table 2 in 44 (7, Supp.)] and unpublished data provided by the Mortality Statistics Branch, National Center for Health Statistics.

HC 1.3
YOUTH MOTOR VEHICLE CRASH DEATHS

Youth ages 16 to 20 had the highest fatality and injury rates of any age group in 1997 due to motor vehicle crashes.[12] Such crashes are among the major causes of injury-related deaths[13] for 15- to 19-year-olds, accounting for 36 percent of injury deaths in 1996;[14] however, as a fraction of all violent deaths to teens, motor vehicle crashes have declined. Preliminary data for 1997 show that motor vehicle crashes claimed 26.5 lives per 100,000 youth ages 15 through 19, compared with 43.6 per 100,000 youth in 1970 (see Figure HC 1.3).[15] The rate of motor vehicle crash deaths among youth has been relatively constant since 1992.

Differences by Gender and Race. For persons under age 20, the decrease in the rate of youth motor vehicle deaths between 1970 and 1997 has been greatest among males ages 15 through 19, falling from 67.1 to 35.9 deaths per 100,000 white males and from 43.4 to 27.8 deaths per 100,000 black males (see Table HC 1.3). Similar decreases in the rates of motor vehicle crash deaths have not been seen among females ages 15 through 19. Among this group of white females, the rate of deaths due to motor vehicle crashes has fluctuated between 20 and 26 per 100,000; by 1997 it was 20.3 deaths per 100,000, compared with 24.4 deaths per 100,000 in 1970. Black females have had lower motor vehicle crash death rates than whites. After a drop from 11.1 deaths per 100,000 in 1970 to 6.7 deaths per 100,000 in 1980, rates have generally increased for this group, to 10.0 deaths per 100,000 in 1997.

Differences by Age. Among youth ages 10 through 14, motor vehicle death rates are quite low in comparison to older youth and dropped from 9.6 to 5.7 per 100,000 between 1970 and 1997. This decline was evident for both white and black males and females, with most of the decline occurring before 1990.

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[12] National Highway Traffic Safety Administration. 1998. *Traffic Safety Facts 1997: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System.* Washington, D.C.: National Center for Statistics and Analysis, U.S. Department of Transportation.

[13] Injury-related deaths include deaths from motor vehicle crashes, fires and burns, drowning, suffocation, and unintentional injuries caused by firearms and other explosive materials, as well as homicides, suicides, and other external causes of death.

[14] Percentages calculated by Child Trends based on data on the number of deaths from all causes and from injuries. Peters, K.D., Kochanek, K.D., and Murphy, S.L. 1998. *National Vital Statistics Report* 47 (9), Table 2. National Center for Injury Control and Prevention, Centers for Disease Control. "1996 United States Deaths and Rates per 100,000: All Injury," available online at http://www.cdc.gov/ncipc/osp/states/0001.htm, 10/15/98.

[15] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Table HC 1.3

Youth motor vehicle crash deaths (rate per 100,000) in the United States, by age, gender, and race: selected years, 1970-1997[a]

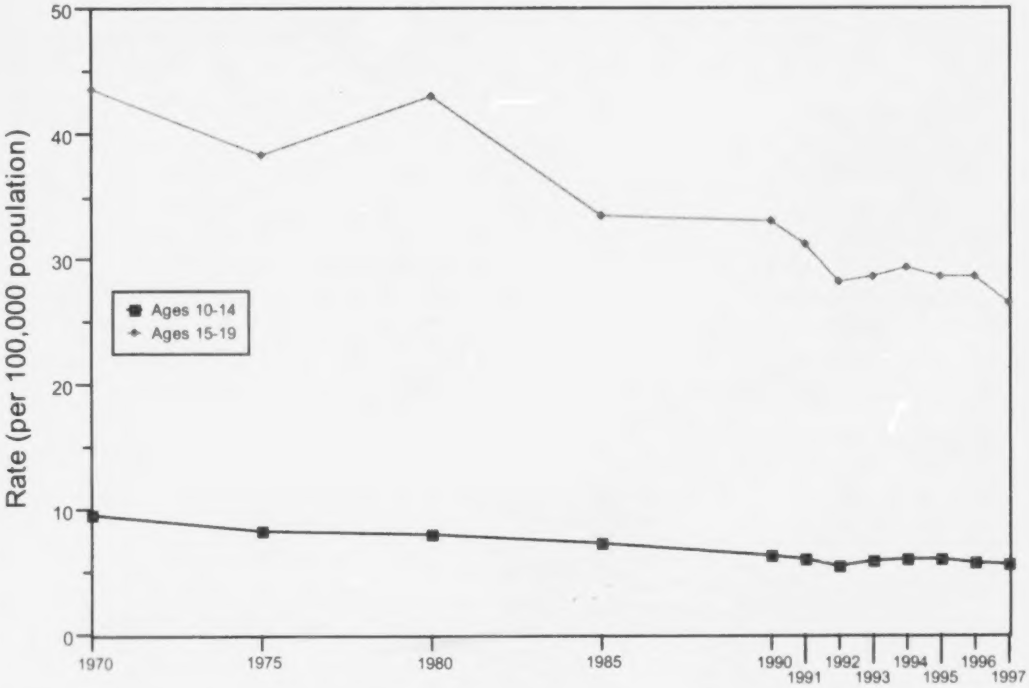
	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997[a]
All youth												
Ages 10-14	9.6	8.4	8.1	7.4	6.4	6.1	5.5	5.9	6.0	6.1	5.8	5.7
Ages 15-19	43.6	38.4	43.0	33.5	33.1	31.2	28.2	28.6	29.3	28.6	28.6	26.5
White males												
Ages 10-14	12.6	10.9	10.9	9.8	7.7	7.8	7.0	7.1	7.5	7.2	7.2	6.8
Ages 15-19	67.1	61.7	69.1	51.3	49.3	44.5	39.6	41.6	41.7	38.9	39.5	35.9
White females												
Ages 10-14	6.6	5.8	5.7	5.6	5.3	4.4	4.1	4.4	4.8	5.0	4.8	4.8
Ages 15-19	24.4	20.6	25.6	22.6	22.2	23.0	21.0	20.2	21.3	22.1	21.2	20.3
Black males												
Ages 10-14	11.9	9.6	7.9	8.9	7.9	8.8	7.8	8.3	7.6	7.7	6.8	7.4
Ages 15-19	43.4	24.6	24.4	22.1	28.7	29.5	26.2	26.7	29.0	29.0	28.2	27.8
Black females												
Ages 10-14	6.4	4.2	4.0	3.0	3.8	3.3	3.6	4.8	4.8	4.2	3.0	4.4
Ages 15-19	11.1	7.1	6.7	7.5	9.7	9.0	9.1	8.2	10.4	10.7	12.4	10.0

[a] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.3

Youth motor vehicle crash deaths (rate per 100,000) in the United States, by age: selected years, 1970-1997[a]



[a] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

HC 1.4
YOUTH HOMICIDES

After more than a decade of sharp increases, the youth homicide rate decreased between 1993 and 1997. The rate of death from homicide for youth ages 15 through 19 more than doubled between 1970 and 1994, increasing from 8.1 per 100,000 in 1970 to 20.7 per 100,000 in 1993 (see Table HC 1.4.A). Virtually all of this increase occurred after 1985 (see Figure HC 1.4.A). Since 1993, rates have decreased steadily to 12.8 deaths per 100,000 in 1997.[16]

Male Youth Homicide Rates by Race. The trend in the death rate due to homicide for black males largely dominates the rate of youth homicides for ages 15 through 19. Since 1990, the rate of death due to homicide for black males ages 15 through 19 has been about 8 to 9 times higher than the rate for their white peers. The rate for this age group of black males actually declined nearly 30 percent from 1970 to 1985, but it increased dramatically from 46.7 per 100,000 in 1985 to 140.7 per 100,000 in 1993. Since 1993, this rate has decreased by over 40 percent, falling to 82.2 deaths per 100,000 by 1997 (see Figure HC 1.4.B).

While the homicide rate for white males of the same age group (15 through 19) is substantially less than that of black males, similar fluctuations in this rate can be seen over time, with the largest increases occurring between 1985 and the early 1990s and decreases in recent years. Overall, this rate has almost doubled going from 5.2 deaths per 100,000 in 1970 to 9.9 deaths per 100,000 in 1997.

Female Youth Homicide Rates by Race. Homicide rates for females ages 15 through 19 are considerably lower than among similarly aged males within the same race groups (rates for black females have actually been higher than rates for white males). For example, the rate for black females was 10.4 per 100,000 in 1997, 87 percent lower than the rate for black males. The gender disparity in homicide rates is also large for whites, although it is not as great as that between black males and females. In 1997, the homicide rate for white females ages 15 through 19 was 2.7 deaths per 100,000, just over a quarter of that for white males. As is the case for males, the youth homicide rate for black females is higher than the rate for white females—nearly four times higher in 1997.

Homicide Rates for Younger Youth. The homicide rate for youth ages 10 through 14 was 1.5 per 100,000 in 1997—substantially lower than the rate for older youth. The disparity between males and females is not as pronounced in this age group as the difference for older youth ages 15 through 19. However, the homicide rates for both white and black males ages 10 through 14 have been approximately twice those of females in recent years.

Homicides Involving Firearms. Firearms have been involved in the majority of youth homicides since 1980 (see Figure HC 1.4.C). Deaths to youth ages 15 through 19 involving firearms accounted for 66 percent of the total deaths due to homicide in 1980 (7.0 firearm deaths per 100,000 out of a total of 10.6 deaths per 100,000 due to homicide). The percentage of firearm-related homicides increased to 85 percent by 1997 for this same age group. Homicides due to firearms are more likely among black youth than among white youth, and most particularly among black males ages 15 through 19 (see Table HC 1.4.B). In 1997, 91 percent of homicides among older male black youth (ages 15 through 19) involved a firearm, compared with 84 percent among older white male youth. The rate of death due to firearms among black males ages 15 through 19 has decreased since 1993, serving as one explanation for the decline in the overall homicide rate among this group. Homicides among female youth involve a firearm less often, although firearms are still the means of the majority of female homicides.

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[16] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Table HC 1.4.A

Youth homicides[a] (rate per 100,000) in the United States, by age, gender, and race: selected years, 1970-1997[b]

	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997[b]
All youth												
Ages 10-14	1.2	1.2	1.4	1.5	2.1	2.2	2.4	2.5	2.2	2.1	1.8	1.5
Ages 15-19	8.1	9.6	10.6	8.6	17.0	19.6	19.3	20.7	20.3	18.2	15.7	12.8
White males												
Ages 10-14	0.6	1.0	1.1	1.4	1.7	1.8	2.0	1.9	1.8	2.0	1.5	1.4
Ages 15-19	5.2	8.1	10.9	7.2	12.5	14.4	15.2	15.2	15.4	14.7	12.2	9.9
White females												
Ages 10-14	0.6	0.8	1.1	0.9	0.9	0.9	1.0	1.2	0.9	1.0	0.9	0.5
Ages 15-19	2.1	3.2	3.9	2.7	3.6	3.6	3.6	3.6	3.4	3.9	2.9	2.7
Black males												
Ages 10-14	6.8	4.1	3.9	4.2	8.1	9.1	9.6	10.5	9.1	8.2	6.0	5.4
Ages 15-19	65.2	51.4	48.8	46.7	115.7	134.6	128.5	140.7	135.8	110.5	100.9	82.2
Black females												
Ages 10-14	2.3	2.3	2.4	1.7	4.8	3.8	5.1	5.2	4.6	3.0	3.1	2.2
Ages 15-19	10.6	15.3	11.0	10.4	15.6	15.6	14.2	18.4	15.1	16.4	12.9	10.4

[a] Homicide includes death by legal intervention.

[b] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Table HC 1.4.B

Youth homicides due to firearms[a] (rate per 100,000) in the United States, by age, gender, and race: selected years, 1980-1997[b]

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997[b]
All youth										
Ages 10-14	0.8	0.8	1.5	1.6	1.9	1.9	1.7	1.6	1.3	1.0
Ages 15-19	7.0	5.7	13.8	16.4	16.7	17.8	17.7	15.4	13.2	10.9
White males										
Ages 10-14	0.7	0.9	1.3	1.4	1.6	1.5	1.5	1.6	1.2	1.1
Ages 15-19	7.2	4.9	9.4	11.7	12.9	12.6	12.9	12.3	10.0	8.3
White females										
Ages 10-14	0.5	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.3
Ages 15-19	1.7	1.2	2.0	2.1	2.3	2.2	2.4	2.2	1.7	1.5
Black males										
Ages 10-14	3.2	3.0	6.9	8.2	8.4	9.8	7.7	7.4	5.2	4.1
Ages 15-19	38.4	36.6	104.4	122.6	118.8	130.1	126.6	101.7	91.7	75.2
Black females										
Ages 10-14	1.0	0.6	3.2	2.7	3.4	3.3	3.3	2.0	1.8	1.5
Ages 15-19	6.2	5.0	10.4	11.2	10.5	14.3	11.1	12.3	9.9	7.2

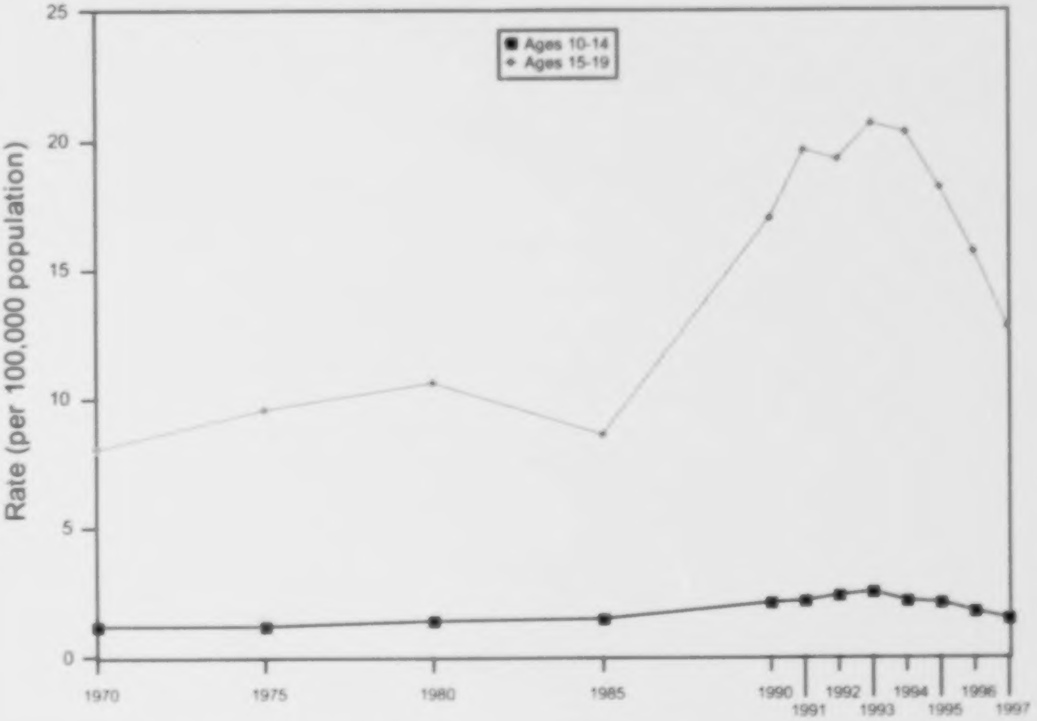
[a] Includes assault by handguns and all other and unspecified firearms.

[b] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.4.A

Youth homicides[a] (rate per 100,000) in the United States, by age: selected years, 1970-1997[b]



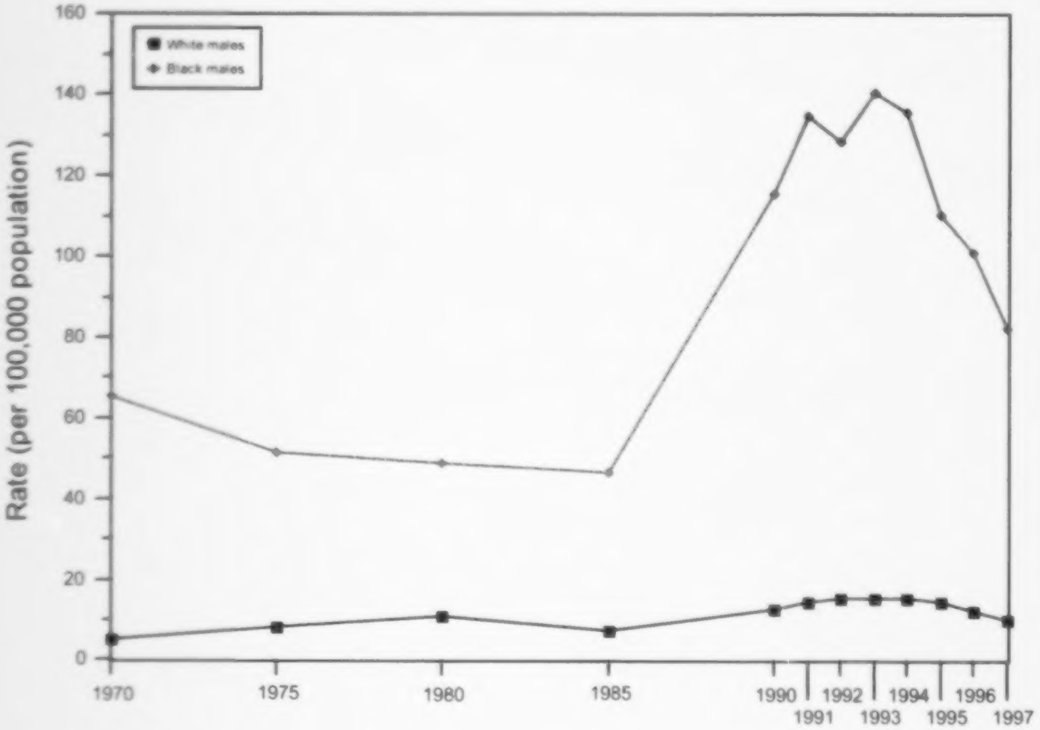
[a] Homicide includes death by legal intervention.

[b] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.4.B

Youth homicides[a] for males ages 15 through 19 (rate per 100,000) in the United States, by race: selected years, 1970-1997[b]



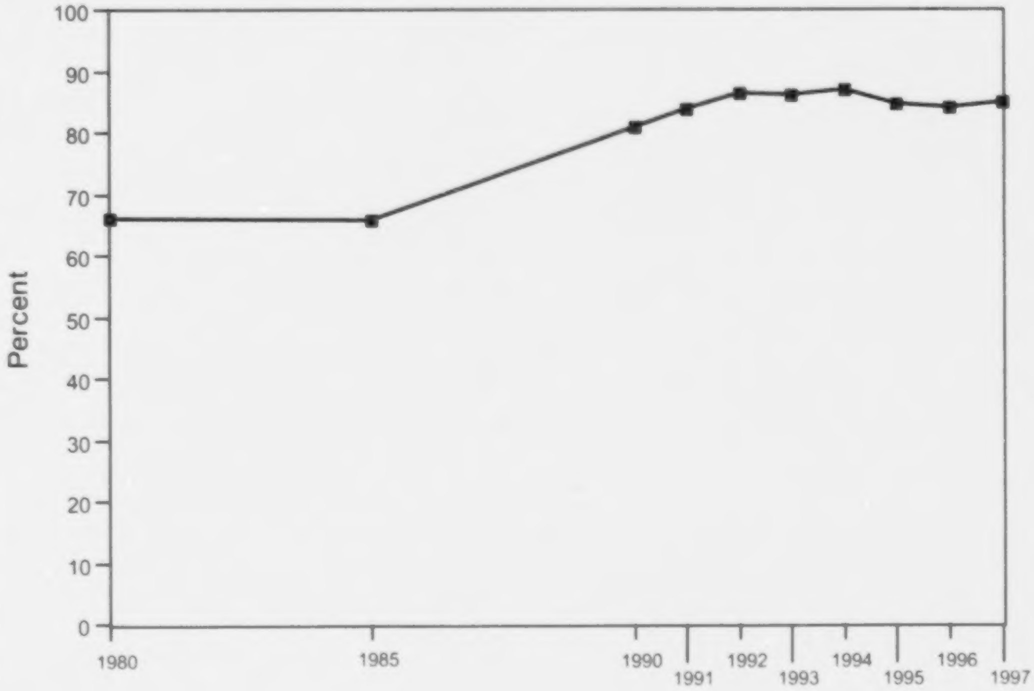
[a] Homicide includes death by legal intervention.

[b] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.4.C

Percentage of youth homicides[a] due to firearms[b] in the United States, for youth ages 15 through 19: selected years, 1980-1997[c]



[a] Homicide includes death by legal intervention.

[b] Includes assault by handguns and all other and unspecified firearms.

[c] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

HC 1.5

YOUTH SUICIDES

Suicide, like homicide, has come to play a proportionately larger role in teen deaths over the past several decades. Between 1970 and 1990, the suicide rate for youth ages 15 through 19 nearly doubled, from 5.9 to 11.1 per 100,000 (see Figure HC 1.5). After remaining stable from 1990 to 1994 at approximately 11 deaths per 100,000 youth ages 15 through 19, the rate decreased slightly to 9.5 per 100,000 in 1997.

Differences by Gender. Male teens are more likely than females to commit suicide (see Table HC 1.5). The suicide rate for white males ages 15 through 19 was 16.0 per 100,000 in 1997, more than four times the rate of 3.5 per 100,000 for white females. Among blacks, males had a rate over four times that of black females for youth ages 15 through 19 in 1997 (11.4 and 2.7 per 100,000, respectively).

Differences by Race. White males ages 15 through 19 have long had a higher suicide rate than their black male peers (see Table HC 1.5). In 1970, white males ages 15 through 19 were twice as likely as black males to commit suicide (9.4 versus 4.7 per 100,000). However, the gap between white and black male suicide rates has narrowed in recent years, with suicide rates of 16.0 and 11.4 per 100,000, respectively, according to 1997 data for white and black males.[17] Among females ages 15 through 19, whites and blacks were equally likely to commit suicide in 1970, with rates of 2.9 per 100,000. By 1975, white female suicide rates were twice that of their black peers ages 15 through 19. White female suicide rates have remained higher than black female rates since that time.

Suicide Rates for Younger Youth. While considerably lower, suicide rates for youth ages 10 through 14 have followed trends similar to those among older youth, with males having higher rates of suicide than females and whites having higher suicide rates than blacks (see Table HC 1.5). In this age group, suicide is infrequent for both sexes and races, making gender or racial differences small as well.

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[17] The race disparity in the suicide rate between all white youth ages 10 through 19 and all black youth ages 10 through 19 narrowed substantially between 1980 and 1995, largely due to the increase of suicide among black youth. In 1980, white youth (ages 10-19) had a suicide rate that was 157 percent greater than that of their black peers; by 1995, the rate among whites was 42 percent greater than the rate among blacks. [These data, not shown here, can be found in Centers for Disease Control and Prevention. March 20, 1998. "Suicide among Black Youths—United States, 1980-1995." *Morbidity and Mortality Weekly Report* 47 (10).]

Table HC 1.5

Youth suicides (rate per 100,000) in the United States, by age, gender, and race: selected years, 1970-1997

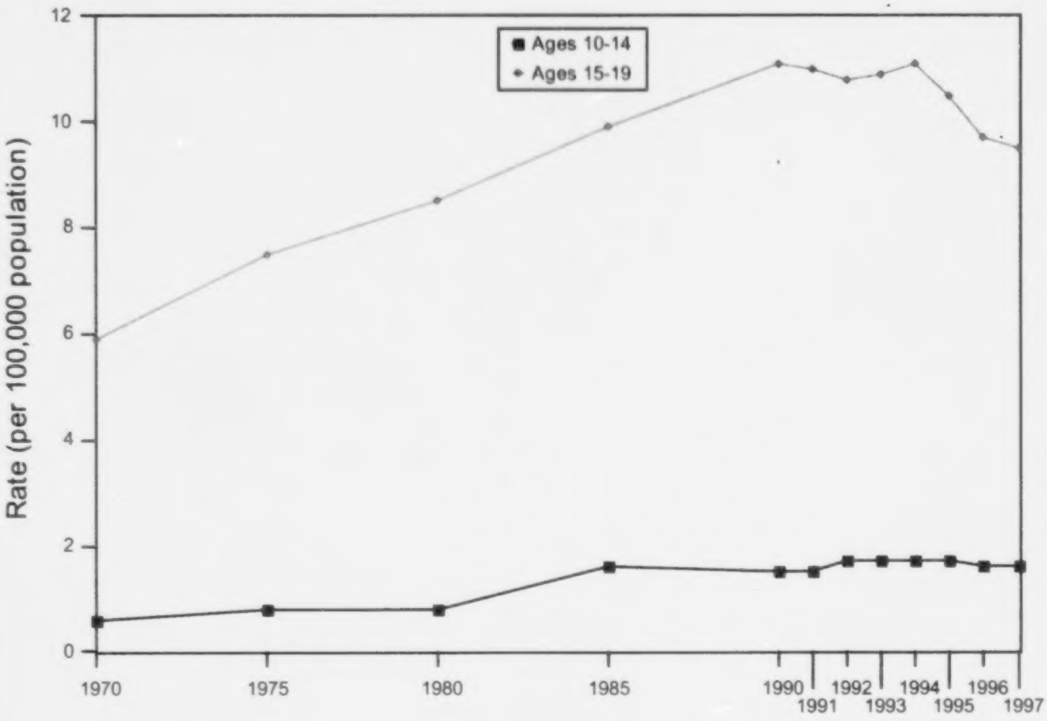
	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997[a]
All youth												
Ages 10-14	0.6	0.8	0.8	1.6	1.5	1.5	1.7	1.7	1.7	1.7	1.6	1.6
Ages 15-19	5.9	7.5	8.5	9.9	11.1	11.0	10.8	10.9	11.1	10.5	9.7	9.5
White males												
Ages 10-14	1.1	1.4	1.4	2.5	2.3	2.4	2.6	2.4	2.5	2.8	2.3	2.5
Ages 15-19	9.4	12.9	15.0	17.1	19.3	19.1	18.4	18.5	18.7	18.4	16.3	16.0
White females												
Ages 10-14	0.3	0.4	0.3	0.9	0.9	0.8	1.1	1.0	1.0	0.9	0.9	0.8
Ages 15-19	2.9	3.1	3.3	4.1	4.0	4.2	3.7	4.2	3.5	3.3	3.8	3.6
Black males												
Ages 10-14	0.3	0.2	0.5	*	1.6	2.0	2.0	2.3	2.1	1.6	1.9	1.9
Ages 15-19	4.7	6.1	5.6	8.2	11.5	12.2	14.8	14.4	16.6	13.8	11.5	11.5
Black females												
Ages 10-14	0.4	0.3	0.1	*	*	*	*	*	*	*	*	*
Ages 15-19	2.9	1.5	1.6	1.5	1.9	*	1.9	*	2.4	2.3	1.8	2.5

* = Not calculated because of unreliability due to infrequency of the event.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.5

Youth suicides (rate per 100,000) in the United States, by age: selected years, 1970-1997



Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

HC 1.6

FIREARM-RELATED DEATHS

Death due to injury by firearms includes deaths due to homicide, suicide, legal intervention, unintentional death by firearms, and firearm-related deaths of undetermined intent. Taken together, suicide and homicide have accounted for the vast majority of firearm-related deaths over the past 30 years—as high as 94 percent in 1994.[18]

Firearm-related death is a growing public health concern for all ages, as it was a major contributor to death in 1994 and the fourth major cause of years of potential life lost before age 65.[19] However, the rate of firearm-related death among youth ages 15 through 19 is of particular concern, as homicide rates for this group rose dramatically in the late 1980s and early 1990s, particularly among black males. In addition, the rate of unintentional death due to firearms has historically been highest among youth ages 15 through 19. Overall, the rate of death due to injury by firearms doubled for youth ages 15 through 19 between 1980 and 1994, from 14.7 deaths to 28.2 deaths per 100,000. Since 1994, the firearm-related death rate has declined, and in 1997 it was at 18.2 deaths per 100,000 (see Table HC 1.6). The firearm-related death rate for youth ages 10 through 14, 2.2 per 100,000 in 1997, is considerably lower than the rate for older youth.[20]

Differences by Race. Among younger adolescents ages 10 through 14, and among females ages 15 through 19, the rate of death due to injury by firearms ranges from two to three times higher for blacks than for whites. According to preliminary data for 1997, the rate of firearm-related death for black males ages 15 through 19 is over four times the rate for their white peers, but it has decreased by 42 percent since 1993, when the rate was over five times higher than that of white males. Based on preliminary 1997 data, the rate for older black males decreased by 19 percent between 1996 and 1997, from 108.7 to 88.2 per 100,000. The high rate of deaths due to homicide among black males in this age group largely accounts for the high firearm-related death rate.[21]

Differences by Gender. Among blacks and whites in both age groups, firearm-related deaths are more prevalent among males; for example, the death rate for black females ages 15 through 19 was 8.8 per 100,000 in 1997, while the rate for their male peers was 10 times greater (88.2 per 100,000). Among whites ages 15 through 19, females experience firearm-related deaths at approximately one-sixth the rate of males.

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[18] Ikeda, R.M., Gorwitz, R., James, S.P., Powell, K.E., and Mercy, J.A. 1997. "Fatal Firearm Injuries in the United States, 1962-1994." *Violence Surveillance Summary Series* (3). Atlanta: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

[19] Ibid.

[20] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

[21] Refer to section HC 1.4 for further discussion of youth homicide.

Table HC 1.6

Youth deaths due to injury by firearms (rate per 100,000) in the United States, by age, gender and race: selected years, 1980-1997[a]

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997[a]
All youth										
Ages 10-14	2.4	2.8	3.3	3.5	3.7	3.8	3.5	3.4	2.7	2.2
Ages 15-19	14.7	13.3	23.3	26.4	26.2	27.8	28.2	24.5	21.2	18.2
White males										
Ages 10-14	3.6	4.5	4.2	4.6	4.5	4.4	4.3	4.4	3.6	3.1
Ages 15-19	20.9	18.4	26.2	29.1	28.8	28.8	30.2	27.9	23.1	20.8
White females										
Ages 10-14	1.0	1.0	1.0	1.0	1.3	1.2	1.2	1.2	1.0	0.6
Ages 15-19	4.1	3.5	4.6	4.6	4.3	4.9	4.7	4.2	3.8	3.5
Black males										
Ages 10-14	4.7	4.8	10.2	11.5	11.6	13.4	11.2	10.1	7.8	6.2
Ages 15-19	46.7	46.5	119.7	140.5	140.9	153.1	151.1	120.3	108.7	88.2
Black females										
Ages 10-14	1.5	*	3.7	3.0	3.9	3.9	3.5	2.5	2.2	2.3
Ages 15-19	7.5	6.1	12.1	12.7	12.4	15.8	13.3	14.2	11.7	8.8

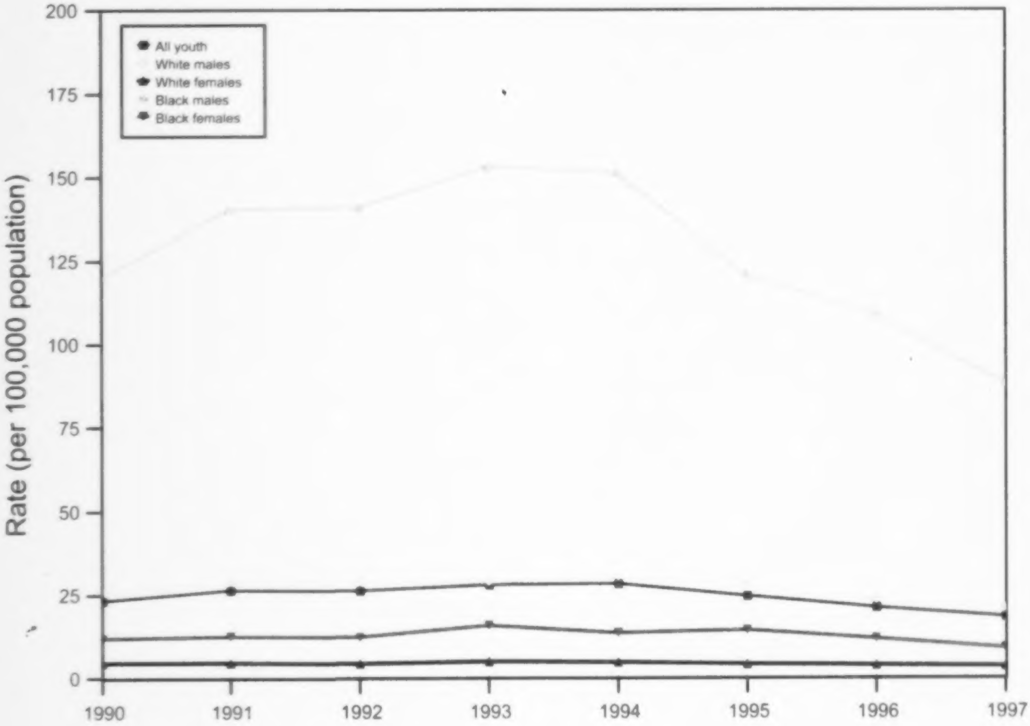
[a] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

* = Not calculated because of unreliability due to infrequency of the event.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

Figure HC 1.6

Deaths due to injury by firearms (rate per 100,000) for youth ages 15 through 19 in the United States, by gender and race: 1990-1997[a]



[a] Data for 1997 are preliminary, based on a sample of 85 percent of all deaths.

Source: National Center for Health Statistics, unpublished work tables prepared by the Mortality Statistics Branch, Division of Vital Statistics.

HC 2.1

HEALTHY BIRTHS

A healthy birth is defined here as a birth with the following characteristics: a five-minute Apgar[22] score of 9 or more out of 10, weight at birth of at least 2,500 grams (5lb., 8oz.), a gestational age of at least 37 weeks, and maternal receipt of prenatal care within the first trimester.

Table HC 2.1 reports the percentage of all births qualifying as healthy births, by race and Hispanic origin and by the mother's marital status and educational background. The table shows an increase between 1985 and 1997 in the percentage of all births defined as healthy (from 59.1 percent to 66.8 percent). This general trend is evident for all of the population subgroups represented in Table HC 2.1, though married mothers experienced a slight decline in 1997.

Differences across Population Subgroups. While healthy births are increasing for most of the subgroups presented in Table HC 2.1, there are also persistent disparities across subgroups (see Figure HC 2.1).

- In 1997, 52.9 percent of births to black women were defined as healthy, compared with 58.2 percent of births to Hispanic women and 69.9 percent of births to white women.
- In 1997, 73.0 percent of births to married women were healthy, compared with 53.5 percent of births to single women.
- In 1997, 70.6 percent of births to women with at least a high school education were healthy, compared with 51.2 percent of births to women with less than a high school education.

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[22] The Apgar score is a numerical expression of the physical condition of an infant shortly after delivery. The infant is rated 0, 1, or 2 on color, heart rate, reflex irritability, muscle tone, and breathing. The maximum score is 10, and a score of 4 or less indicates examination and treatment are warranted. As defined in Apgar, V., Holiday, D.A., James, L.S., Weisbrot, I.N., and Berrien, C. 1953. "Evaluation of the Newborn Infant-2nd Report." *Current Researchers in Anesthesia and Analgesia* 32: 260-267.

Table HC 2.1

Percentage of all births in the United States defined as healthy,[a] by mother's race and Hispanic origin,[b] marital status,[c] and educational attainment: selected years, 1985-1997

	1985	1991	1994	1995	1996	1997
Total	59.1	61.1	65.9	66.6	66.6	66.8
Race and Hispanic origin[b]						
White	62.7	65.0	69.8	70.1	69.9	70.0
Black	41.5	43.3	49.7	51.3	52.2	52.9
Hispanic	48.6	49.8	55.4	56.3	57.2	58.2
Marital status[c]						
Married	65.0	68.6	73.0	73.3	73.2	73.0
Single	37.9	43.1	50.6	52.2	52.9	53.5
Education						
High school or more	64.0	67.1	70.1	70.6	70.6	70.6
Less than high school	40.0	43.3	48.8	50.0	50.4	51.2

[a] Healthy birth is defined as follows: 5-minute Apgar score of 9 or above, birth weight of at least 2,500 grams (5lb. 8oz.), gestational age of 37 weeks or more, and prenatal care in the first trimester.

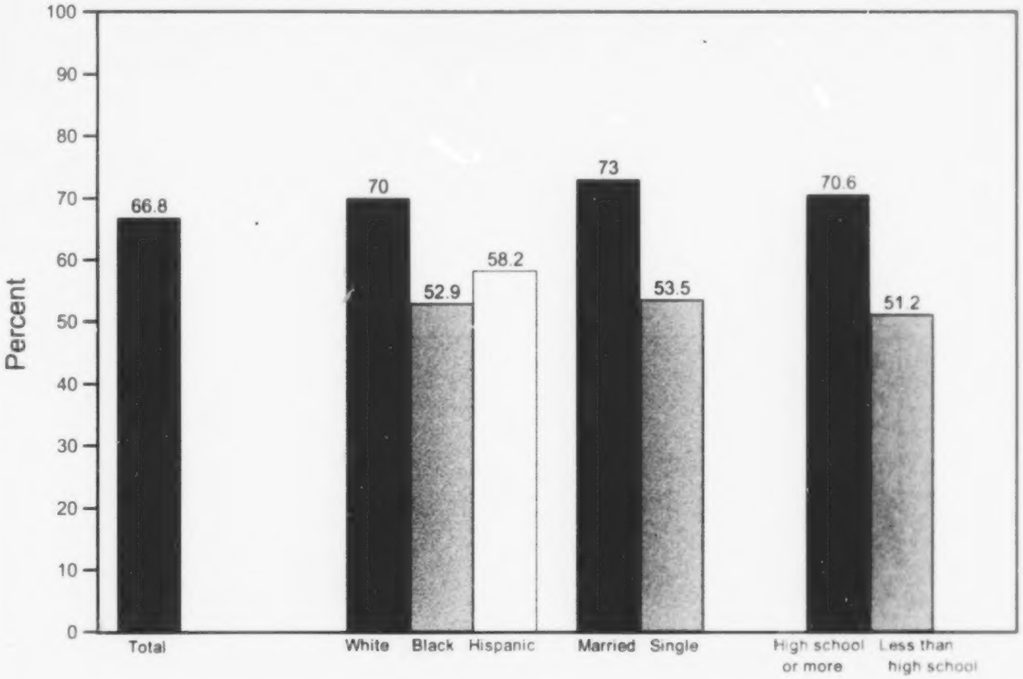
[b] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[c] Single status refers to women who have never been married or are divorced or widowed.

Sources: 1985 and 1991 data from Morrison, D.R. 1994. "Healthy Birth Index." Final Report. Submitted to the Annie E. Casey Foundation, Kids Count Indicator Development Project. Washington, D.C.: Child Trends; special tabulations for 1994-1997 birth data by Sally C. Curtin, National Center for Health Statistics.

Figure HC 2.1

Percentage of all births in the United States defined as healthy,[a] by mother's race and Hispanic origin,[b] marital status,[c] and educational attainment: 1997



[a] Healthy birth is defined as follows: 5-minute Apgar score of 9 or above, birth weight of at least 2,500 grams (5lb. 8oz.), gestational age of 37 weeks or more, and prenatal care in the first trimester.

[b] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[c] Single status refers to women who have never been married or are divorced or widowed.

Source: Special tabulations for 1997 birth data by Sally C. Curtin, National Center for Health Statistics.

HC 2.2
LOW BIRTH WEIGHT

Low birth-weight infants [babies born weighing less than 2,500 grams (5lb. 8oz.)] face an increased risk of physical and developmental complications and death.[23] These babies account for four-fifths of all neonatal deaths (deaths under 28 days of age) and are 23 times more likely to die during the first year than are heavier infants.[24]

Although slight declines are seen in the early 1980s, overall the percentage of all infants born at low birth-weight has increased steadily since 1984, when 6.7 percent of infants were born at low birth-weight, compared with 7.6 percent in 1998 (see Table HC 2.2 data for 1998 are preliminary).

Differences by Race and Ethnicity. Low birth-weight rates are substantially higher among black infants than among other races and Hispanics. The percentages of low birth-weight infants among whites, American Indians/Alaska Natives, Asians/Pacific Islanders, and Hispanics have remained within one percentage point of each other and have mostly hovered around 6 to 7 percent over the last two decades, compared to around 13 percent for blacks.

Among Asians/Pacific Islanders and Hispanics, there are subgroup differences. Since 1970, Chinese women have consistently had the lowest percentage of low-weight births, and Filipino women have had the highest among Asian/Pacific Islander women. In 1997, these percentages were 5.1 percent and 8.3 percent, respectively. Among Hispanics, Mexican-American women have generally had the lowest percentage of low birth-weight infants (ranging from 5.6 to 6.0 percent since 1980), and Puerto Rican women have had the highest (ranging from 8.7 to 9.4 percent since 1980).

Differences by Age. For women in all age groups, there was a decline in the percentage of low-weight births between 1970 and 1984. Since 1984, however, that percentage increased slightly across nearly all age groups. The following trends, illustrated in Table HC 2.2, are particularly noteworthy:

- Mothers under 15 years if age continue to be the most likely to have a low birth-weight baby; risk of low birth-weight is lowest among births to women 25-29 years of age.
- The recent rise in overall low birth-weight, especially among non-Hispanic white births, has been importantly influenced by the increase in the rate of multiple births; twins, triplets, and other higher order multiples are at much greater risk than singletons of being born at weights of less than 2,500 grams.

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[23] Disorders relating to short gestation and unspecified low birth-weight were the second leading cause of death to infants in 1996, as reported in MacDorman, M.F. and Atkinson, J.A. 1999. "Infant Mortality Statistics from the 1997 Period Linked Birth/Infant Death Data Set." *Monthly Vital Statistics Report* 47(23). Hyattsville, Md.: National Center for Health Statistics, 1999.

[24] MacDorman, M.F. and Atkinson, J.A. 1999. "Infant Mortality Statistics from the 1997 Period Linked Birth/Infant Death Data Set." *National Vital Statistics Report* 47(23). Hyattsville, Md.: National Center for Health Statistics, 1999.; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Births: Final Data for 1997." *National Vital Statistics Report* 47(18). Hyattsville, Md.: National Center for Health Statistics.

SEE TABLE FOLLOWING PAGES

Table HC 2.2 (Part 1)

Low birth-weight[a] infants as a percentage of all infants born in the United States by mother's race/ethnicity[b] and by age: selected years, 1970-1998[f]

	1970	1975	1980	1985	1990	1991
Total	7.9	7.4	6.8	6.8	7.0	7.1
Race/ethnicity						
White[c]	6.9	6.3	5.7	5.7	5.7	5.8
Black[c]	13.9	13.2	12.7	12.7	13.3	13.6
American Indian/Alaska Native[c]	8.0	6.4	6.4	5.9	6.1	6.2
Asian/Pacific Islander[c]	—	—	6.7	6.2	6.5	6.5
Chinese	6.7	5.3	5.2	5.0	4.7	5.1
Japanese	9.0	7.5	6.6	6.2	6.2	5.9
Filipino	10.0	8.1	7.4	7.0	7.3	7.3
Hawaiian and part Hawaiian	—	—	—	—	7.2	6.7
Other Asian or Pacific Islander	—	—	—	—	6.7	6.7
Hispanic origin[b,d]	—	—	6.1	6.2	6.1	6.1
Mexican American	—	—	5.6	5.8	5.6	5.6
Puerto Rican	—	—	9.0	8.7	9.0	9.4
Cuban	—	—	5.6	6.0	5.7	5.6
Central and South American	—	—	5.8	5.7	5.8	5.9
Other and unknown Hispanic	—	—	7.0	6.8	6.9	7.2
Age						
Under age 15	16.6	14.1	14.6	12.9	13.3	13.7
15-19 years	10.5	10.0	9.4	9.3	9.3	9.3
20-24 years	7.4	7.1	6.9	6.9	7.1	7.2
25-29 years	6.9	6.1	5.8	5.9	6.2	6.3
30-34 years	7.5	6.8	5.9	6.1	6.4	6.6
35-49 years[e]	8.8	8.4	7.2	7.1	7.4	7.7

[a] Before 1979, low birth weight defined as infants weighing 2,500 grams (5lb. 8oz.) or less. From 1979 and beyond, low birth weight defined as infants weighing less than 2,500 grams (5lb. 8oz.).

[b] Birth figures for Hispanic infants are based on data from 22 states that reported Hispanic origin on the birth certificate in 1980, 23 states and the District of Columbia in 1985, 48 states and the District of Columbia in 1990, 49 states and the District of Columbia in 1992, and 50 states and the District of Columbia since 1993.

[c] Includes persons of Hispanic origin.

[d] Persons of Hispanic origin may be of any race.

[e] Data for 1997 are for ages 35-54 years.

[f] Data for 1998 are preliminary.

Sources: Martin, J.A., Smith, B.L., Mathews, T.J., Ventura, S.J. 1999. "Births and Deaths: Preliminary Data for 1998." *National Vital Statistics Reports* 47(25). Hyattsville, Md.: National Center for Health Statistics. Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Report of Final Natality Statistics, 1996. *Monthly Vital Statistics Report* 46 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 45; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Report* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 45; National Center for Health Statistics. *Health, United States, 1998.* Hyattsville, Md.: National Center for Health Statistics, 1998, Table 11; and unpublished tabulations, Division of Vital Statistics, National Center for Health Statistics.

Table HC 2.2 (Part 2)

Low birth-weight[a] infants as a percentage of all infants born in the United States by mother's race/ethnicity[b] and by age: selected years, 1970-1998[f]

	1992	1993	1994	1995	1996	1997	1998
Total	7.1	7.2	7.3	7.3	7.4	7.5	7.6
Race/ethnicity							
White[c]	5.8	6.0	6.1	6.2	6.3	6.5	6.5
Black[c]	13.3	13.3	13.2	13.1	13.0	13.0	13.0
American Indian/Alaska Native[c]	6.2	6.4	6.5	6.6	6.5	6.8	NA
Asian/Pacific Islander[c]	6.6	6.6	6.8	6.9	7.1	7.2	NA
Chinese	5.0	4.9	4.8	5.3	5.0	5.1	NA
Japanese	7.0	6.5	6.9	7.3	7.3	6.8	NA
Filipino	7.4	7.0	7.8	7.8	7.9	8.3	NA
Hawaiian and part Hawaiian	6.9	6.8	7.2	6.8	6.8	7.2	NA
Other Asian or Pacific Islander	6.7	6.9	7.1	7.1	7.4	7.5	NA
Hispanic origin[b,d]	6.1	6.2	6.3	6.3	6.3	6.4	6.4
Mexican American	5.6	5.8	5.8	5.8	5.9	6.0	NA
Puerto Rican	9.2	9.2	9.1	9.4	9.2	9.4	NA
Cuban	6.1	6.2	6.3	6.5	6.5	6.8	NA
Central and South American	5.8	5.9	6.0	6.2	6.0	6.3	NA
Other and unknown Hispanic	7.2	7.5	7.5	7.5	7.7	7.9	NA
Age							
Under age 15	13.2	13.5	13.7	13.5	12.8	13.6	13.1
15-19 years	9.3	9.2	9.3	9.3	9.3	9.5	9.5
20-24 years	7.1	7.2	7.3	7.3	7.4	7.4	7.5
25-29 years	6.2	6.4	6.4	6.4	6.5	6.6	6.7
30-34 years	6.5	6.7	6.7	6.7	6.8	6.9	7.0
35-49 years[e]	7.8	8.1	8.2	8.3	8.3	8.6	8.7

[a] Before 1979, low birth weight defined as infants weighing 2,500 grams (5lb. 8oz.) or less. From 1979 and beyond, low birth weight defined as infants weighing less than 2,500 grams (5lb. 8oz.).

[b] Birth figures for Hispanic infants are based on data from 22 states that reported Hispanic origin on the birth certificate in 1980, 23 states and the District of Columbia in 1985, 48 states and the District of Columbia in 1990, 49 states and the District of Columbia in 1992, and 50 states and the District of Columbia since 1993.

[c] Includes persons of Hispanic origin.

[d] Persons of Hispanic origin may be of any race.

[e] Data for 1997 are for ages 35-54 years.

[f] Data for 1998 are preliminary.

Sources: Martin, J.A., Smith, B.L., Mathews, T.J., Ventura, S.J. 1999. "Births and Deaths: Preliminary Data for 1998." *National Vital Statistics Reports* 47(25). Hyattsville, Md.: National Center for Health Statistics. Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Report of Final Natality Statistics, 1996. *Monthly Vital Statistics Report* 46 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 45; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Report* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 45; National Center for Health Statistics. *Health, United States, 1998.* Hyattsville, Md.: National Center for Health Statistics, 1998, Table 11; and unpublished tabulations, Division of Vital Statistics, National Center for Health Statistics.

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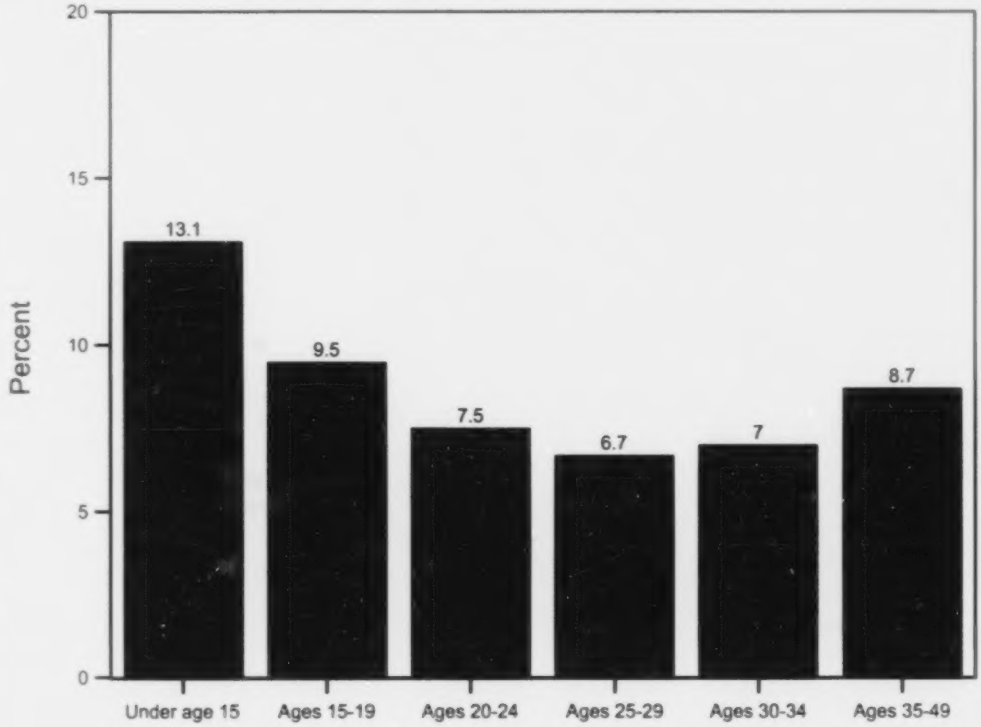
Figure HC 2.2

Low birth-weight[a] infants as a percentage of all infants born in the United States, by age of mother: 1998[b]



[a] Low birth weight defined as infants weighing less than 2,500 grams (5lb. 8oz.).

[b] Data for 1998 are preliminary.

Sources: Martin, J.A., Smith, B.L., Mathews, T.J., Ventura, S.J. 1999. "Births and Deaths: Final Data for 1998." *National Vital Statistics Reports* 47(25). Hyattsville, Md.: National Center for Health Statistics.

HC 2.3

VERY LOW BIRTH WEIGHT

Very low birth-weight infants [babies born weighing less than 1,500 grams (3lb. 4oz.)] are at particularly high risk of severe physical and developmental complications and death. Advances in medical technology in recent years have made it possible for increasing numbers of very low birth-weight infants to survive; however, these babies are 94 times more likely to die during the first year of life than babies weighing at least 2,500 grams.[25]

The percentage of infants born at very low birth weight has remained relatively constant for the last 27 years (see Table HC 2.3). Between 1970 and 1989 (not shown), 1.2 percent of all infants were classified as very low birth weight.[26] The proportion then increased slightly to 1.3 percent, where it remained from 1990 to 1995, then to 1.4 percent in 1996-1998.

Differences by Race and Ethnicity. The percentage of babies born at very low birth weight varies by race and Hispanic origin (see Table HC 2.3). For white, American Indian/Alaska Native, and Asian/Pacific Islander infants, the percentage of very low weight births has remained at or about 1 percent from 1970 through 1997. The same is true of Hispanic infants since 1980. For blacks, the percentage of very low birth weight babies increased from 2.4 percent in 1970 to 3 percent by 1991, where it has remained through 1997.

Differences by Age. A woman's age appears to be an important factor in the likelihood of very low birth weight, particularly at the youngest ages. The percentage of very low birth-weight infants born to women under age 15 has fluctuated between 3.1 and 3.6 percent between 1975 and 1998. The percentage of very low birth-weight births among women ages 15 through 19 is lower than the proportion of such births to their younger counterparts but remains slightly higher than the proportion observed for women ages 20-39 years.

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[25] MacDorman, M.F. and Atkinson, J.O. 1999. "Infant Mortality Statistics from the 1997 Period Linked Birth/Infant Death Data Set." *National Vital Statistics Report* 47(23). Hyattsville, Md.: National Center for Health Statistics; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics.

[26] Data for individual years indicate that the rate remained at 1.2 percent through 1989 (not shown).

SEE TABLE FOLLOWING PAGES

Table HC 2.3 (Part 1)

Very low birth-weight[a] infants as a percentage of all infants born in the United States, by mother's race/ethnicity[b] and by age: selected years, 1970-1998[f]

	1970	1975	1980	1985	1990	1991
Total	1.2	1.2	1.2	1.2	1.3	1.3
Race/ethnicity[b]						
White[c]	1.0	0.9	0.9	0.9	1.0	1.0
Black[c]	2.4	2.4	2.5	2.7	2.9	3.0
American Indian/Alaska Native[c]	1.0	1.0	0.9	1.0	1.0	1.1
Asian/Pacific Islander[c]	—	—	0.9	0.9	0.9	0.9
Chinese	0.8	0.5	0.7	0.6	0.5	0.7
Japanese	1.5	0.9	0.9	0.8	0.7	0.6
Filipino	1.1	0.9	1.0	0.9	1.1	1.0
Hawaiian and part Hawaiian	—	—	—	—	1.0	1.0
Other Asian or Pacific Islander	—	—	—	—	0.9	0.9
Hispanic origin[d]	—	—	1.0	1.0	1.0	1.0
Mexican American	—	—	0.9	1.0	0.9	0.9
Puerto Rican	—	—	1.3	1.3	1.6	1.7
Cuban	—	—	1.0	1.2	1.2	1.2
Central and South American	—	—	1.0	1.0	1.1	1.0
Other and unknown Hispanic	—	—	1.0	1.0	1.1	1.1
Age						
Under age 15	—	3.1	3.4	3.1	3.2	3.4
15-19 years	—	1.8	1.7	1.8	1.8	1.8
20-24 years	—	1.1	1.1	1.2	1.3	1.3
25-29 years	—	0.9	1.0	1.0	1.1	1.1
30-34 years	—	1.0	1.0	1.1	1.2	1.2
35-49 years[e]	—	1.2	1.2	1.3	1.4	1.5

[a] Before 1979, very low birth weight defined as infants weighing 1,500 grams (3lb. 4oz.) or less. From 1979 and beyond, very low birth weight defined as infants weighing less than 1,500 grams (3lb. 4oz.).

[b] Birth figures for Hispanic infants are based on data from 22 states that reported Hispanic origin on the birth certificate in 1980, 23 states and the District of Columbia in 1985, 48 states and the District of Columbia in 1990, 49 states and the District of Columbia in 1992, and 50 states and the District of Columbia since 1993.

[c] Includes persons of Hispanic origin.

[d] Persons of Hispanic origin may be of any race.

[e] Data for 1997 are for ages 35-54 years.

[f] Data for 1998 are preliminary.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, 44, and 45; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Report of Final Natality Statistics, 1996. *Monthly Vital Statistics Report* 46 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 45; National Center for Health Statistics. 1998. *Health, United States, 1998.* Hyattsville, Md.: National Center for Health Statistics, Table 11; and unpublished tabulations, Division of Vital Statistics, National Center for Health Statistics.

Table HC 2.3 (Part 2)

Very low birth-weight[a] infants as a percentage of all infants born in the United States, by mother's race/ethnicity[b] and by age: selected years, 1970-1998[f]

	1992	1993	1994	1995	1996	1997	1998
Total	1.3	1.3	1.3	1.3	1.4	1.4	1.4
Race/ethnicity[b]							
White[c]	1.0	1.0	1.0	1.1	1.1	1.1	1.2
Black[c]	3.0	3.0	3.0	3.0	3.0	3.0	3.1
American Indian/Alaska Native[c]	1.0	1.1	1.1	1.1	1.2	1.2	NA
Asian/Pacific Islander[c]	0.9	0.9	0.9	0.9	1.0	1.1	NA
Chinese	0.7	0.6	0.6	0.7	0.6	0.7	NA
Japanese	0.9	0.7	0.9	0.9	0.8	0.8	NA
Filipino	1.1	1.0	1.2	1.1	1.2	1.3	NA
Hawaiian and part Hawaiian	1.0	1.1	1.2	0.9	1.0	1.4	NA
Other Asian or Pacific Islander	0.9	0.9	0.9	0.9	1.0	1.1	NA
Hispanic origin[d]	1.0	1.1	1.1	1.1	1.1	1.1	1.1
Mexican American	0.9	1.0	1.0	1.0	1.0	1.0	NA
Puerto Rican	1.7	1.7	1.6	1.8	1.7	1.8	NA
Cuban	1.2	1.2	1.3	1.2	1.3	1.4	NA
Central and South American	1.0	1.0	1.1	1.1	1.1	1.2	NA
Other and unknown Hispanic	1.1	1.2	1.3	1.3	1.5	1.3	NA
Age							
Under age 15	3.1	3.6	3.4	3.2	3.2	3.1	3.3
15-19 years	1.8	1.8	1.7	1.7	1.7	1.8	1.8
20-24 years	1.3	1.3	1.3	1.3	1.3	1.4	1.4
25-29 years	1.1	1.1	1.2	1.2	1.2	1.2	1.3
30-34 years	1.2	1.2	1.2	1.2	1.3	1.3	1.4
35-49 years[e]	1.5	1.5	1.6	1.6	1.6	1.7	1.7

[a] Before 1979, very low birth weight defined as infants weighing 1,500 grams (3lb. 4oz.) or less. From 1979 and beyond, very low birth weight defined as infants weighing less than 1,500 grams (3lb. 4oz.).

[b] Birth figures for Hispanic infants are based on data from 22 states that reported Hispanic origin on the birth certificate in 1980, 23 states and the District of Columbia in 1985, 48 states and the District of Columbia in 1990, 49 states and the District of Columbia in 1992, and 50 states and the District of Columbia since 1993.

[c] Includes persons of Hispanic origin.

[d] Persons of Hispanic origin may be of any race.

[e] Data for 1997 are for ages 35-54 years.

[f] Data for 1998 are preliminary.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, 44, and 45; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Report of Final Natality Statistics, 1996. *Monthly Vital Statistics Report* 46 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 45; National Center for Health Statistics. 1998. *Health, United States, 1998.* Hyattsville, Md.: National Center for Health Statistics, Table 11; and unpublished tabulations, Division of Vital Statistics, National Center for Health Statistics.

HC 2.4

GENERAL HEALTH CONDITIONS: PERCENTAGE OF CHILDREN IN VERY GOOD OR EXCELLENT HEALTH

Most children in the United States are reported by their parents to be in very good or excellent health. The percentage of all children under age 18 reported to be in very good or excellent health has remained at about 80 percent since 1984. These reports vary little by gender; there are modest differences by age of child for some population subgroups (see Table HC 2.4).

Differences by Race. Parents' reports of their children's health vary by race. Between 1984 and 1996, black parents were less likely than white parents to report that their children were in very good or excellent health. In 1996, 75 percent of black children under age 5 were reported in very good or excellent health, compared with 82 percent of white children. Seventy percent of black children ages 5 to 17 were reported in very good or excellent health, compared with 81 percent of white children in this age group (see Table HC 2.4).

Differences by Family Income. Parents' reports of their children's health also vary by family income, with higher-income families more likely to report that their children are in very good or excellent health. For example, in 1996, 64 percent of children under age 18 who fell below the poverty line were reported to be in very good or excellent health, compared with 84 percent for children at or above the poverty line. Sixty-seven percent of children under age 5 in families with annual incomes under $10,000 were reported to be in very good or excellent health, compared with 87 percent of children in families with annual incomes of $35,000 or more in 1996. A similar pattern exists for children ages 5 to 17 (see Figure HC 2.4.A).

Table HC 2.4

Percentage of children under age 18 in the United States who are reported by their parents to be in very good or excellent health, by age, race, gender, poverty status, and family income:[a] selected years, 1984-1996

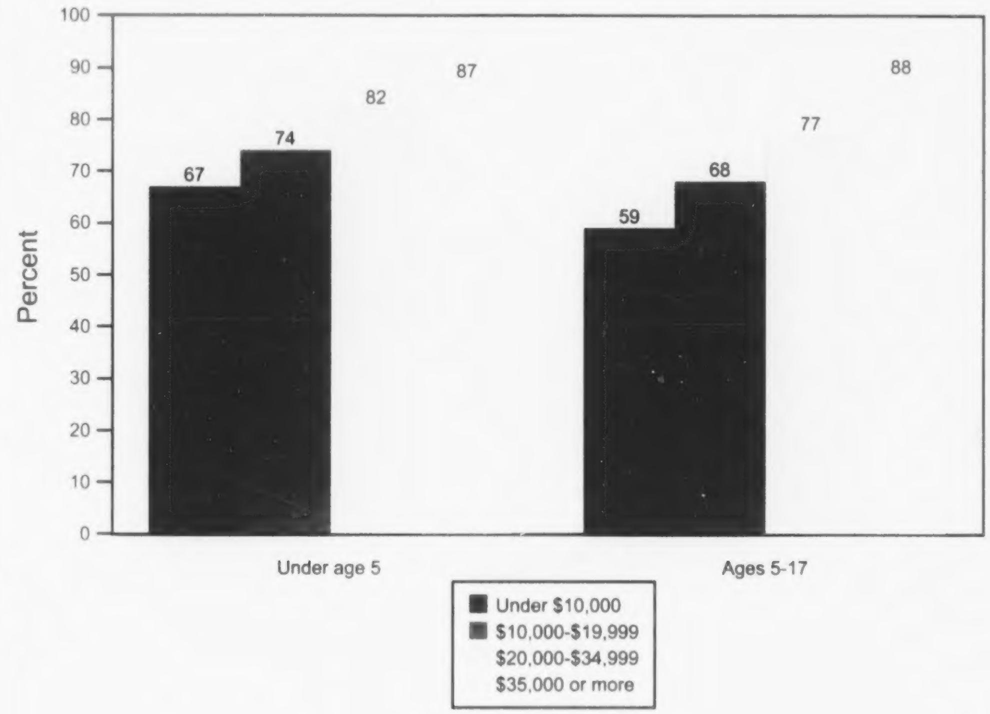
	1984	1987	1990	1991	1992	1993	1994	1995	1996
Ages 0-17									
Total	78	81	81	80	80	79	79	81	79
Poverty status									
Below poverty	62	65	66	65	65	64	64	65	64
At or above poverty	82	84	84	83	83	83	83	85	84
Under age 5									
Total	79	81	81	81	80	80	81	81	80
Race									
White	81	84	83	—	82	82	83	83	82
Black	67	71	72	—	70	71	72	72	75
Gender									
Male	78	—	80	—	79	80	81	80	80
Female	79	—	82	—	81	80	81	82	81
Annual family income[a]									
Under $10,000	—	—	—	—	—	—	—	—	67
$10,000-$19,999	—	—	—	—	—	—	—	—	74
$20,000-$34,999	—	—	—	—	—	—	—	—	82
$35,000 or more	—	—	—	—	—	—	—	—	87
Poverty status									
Below poverty	66	66	69	68	67	68	68	66	68
At or above poverty	82	85	84	84	84	84	84	86	85
Ages 5-17									
Total	77	80	80	80	80	79	79	80	79
Race									
White	80	83	83	—	82	81	81	82	81
Black	65	66	68	—	68	70	68	70	70
Gender									
Male	78	—	81	—	80	79	79	80	79
Female	77	—	80	—	79	78	78	80	79
Annual family incomea									
Under $10,000	—	—	—	—	—	—	—	—	59
$10,000-$19,999	—	—	—	—	—	—	—	—	68
$20,000-$34,999	—	—	—	—	—	—	—	—	77
$35,000 or more	—	—	—	—	—	—	—	—	88
Poverty status									
Below poverty	60	65	64	64	64	63	62	64	62
At or above poverty	81	83	84	83	83	82	82	85	83

[a] Family income is not adjusted in the National Health Interview Survey for comparison over time; therefore, family income is shown only for the most recent year. Income breaks are those provided by the National Center for Health Statistics.

Sources: Data from the National Health Interview Survey, National Center for Health Statistics (unpublished tabulations provided by the Centers for Disease Control and Prevention and other estimates as published in *America's Children: Key National Indicators of Well-Being, 1998*, Federal Interagency Forum on Child and Family Statistics, Table HEALTH1, available online at http://childstats.gov/ac1998/xhealth1.htm); Benson, V., and Marono, M.A. 1996. "Current Estimates from the National Health Interview Survey, 1995." *Vital Health Statistics* 10 (199), Table 70. National Center for Health Statistics. Also previous issues of this report [Series 10, Nos. 156, 166, 181, 189, 190, and 199 (Table 70 in each)].

Figure HC 2.4.A

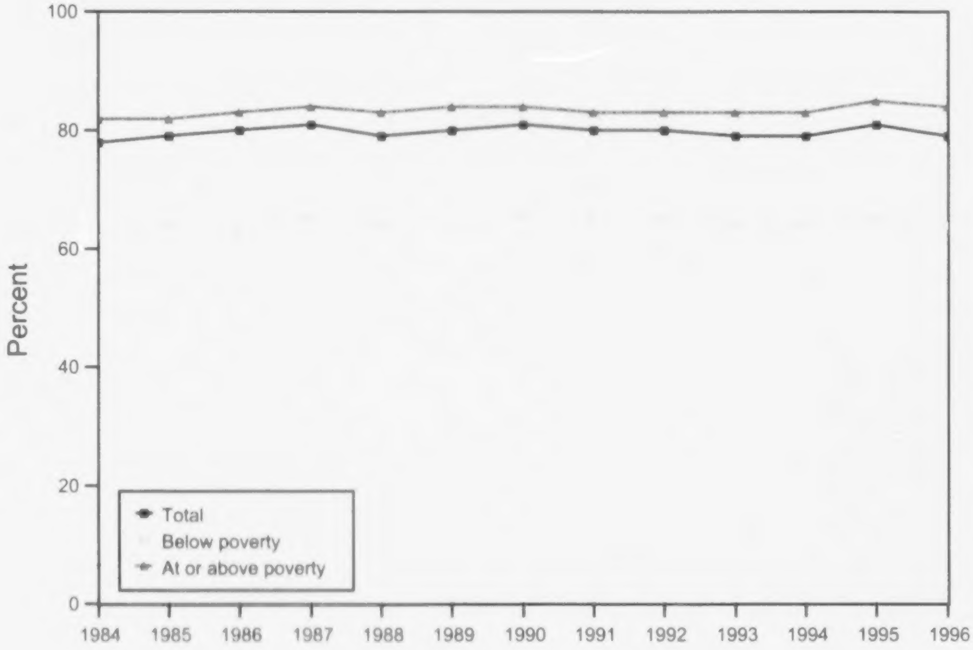
Percentage of children under age 18 in the United States who are reported by their parents to be in very good or excellent health, by age and family income: 1996



Sources: Unpublished data from the National Health Interview Survey, provided by the National Center for Health Statistics, Centers for Disease Control and prevention.

Figure HC 2.4.B

Percentage of children under age 18 in the United States who are reported by their parents to be in very good or excellent health, by poverty status: 1984-1996



Sources: Data from the National Health Interview Survey, National Center for Health Statistics (unpublished tabulations provided by the Centers for Disease Control and prevention and other estimates as published in *America's Children: Key National Indicators of Well-Being, 1998*, Federal Interagency Forum on Child and Family Statistics, Table HEALTH1, available online at http://childstats.gov/ac1998/xhealth1.htm); Benson, V., and Marono, M.A. 1996. "Current Estimates from the National Health Interview Survey, 1995." *Vital Health Statistics* 10 (199), Table 70. National Center for Health Statistics. Also previous issues of this report [Series 10, Nos. 156, 166, 181, 189, 190, and 199 (Table 70 in each)].

HC 2.5

CHRONIC HEALTH CONDITIONS

Chronic health problems can cause children to miss school and often require medical assistance and follow-up. Chronic conditions can also create stress for children and their parents, cause parents to miss work, and increase a family's medical expenses.

Over the period from 1984 to 1996, respiratory conditions were the most prevalent chronic health problems experienced by children under age 17 (see Table HC 2.5). The incidence of asthma and chronic sinusitis increased between 1984 and 1995 but decreased in 1996. Chronic sinusitis affected 47 children per thousand in 1984, 76 per thousand in 1995, and 64 per thousand in 1996. Meanwhile, asthma affected 43 children per thousand in 1984, compared with 62 per thousand in 1996. Asthma attacks, which involve episodes of wheezing, breathlessness, and coughing, can range from mild to life-threatening, and children with asthma miss an average of twice as many school days as children without asthma.[27] The prevalence rate for asthma increased between 1980 and 1994 for all race groups, both sexes, and all age groups, with the most substantial increase among children under four (a 160 percent increase) and ages 5 to 14 (a 74 percent increase).[28]

Between 1984 and 1996, the number of children suffering from chronic diseases of the tonsils or adenoids (34 and 20 per thousand in 1984 and 1996, respectively), hearing impairments (24 and 13), and anemia (11 and 5) decreased.

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[27] U.S. Department of Health and Human Services Press Office. May 21, 1998. "HHS Targets Efforts on Asthma." *Fact Sheet*. Available online at http://www.hhs.gov/news/press/1998.html.

[28] Mannino, D.M., Homa, D.M., Pertowski, C.A., Ashizawa, A, Nixon, L.L., Johnson, C.A., Ball, L.B., Jack, E., and Kang, D.S. 1998. "Surveillance for Asthma: United States, 1960-1995." *Morbidity and Mortality Weekly Report* 47 (SS-1): 1-28.

Table HC 2.5

Selected chronic health conditions[a] for children under age 18 (rate per 1,000 children) in the United States: selected years, 1984-1996

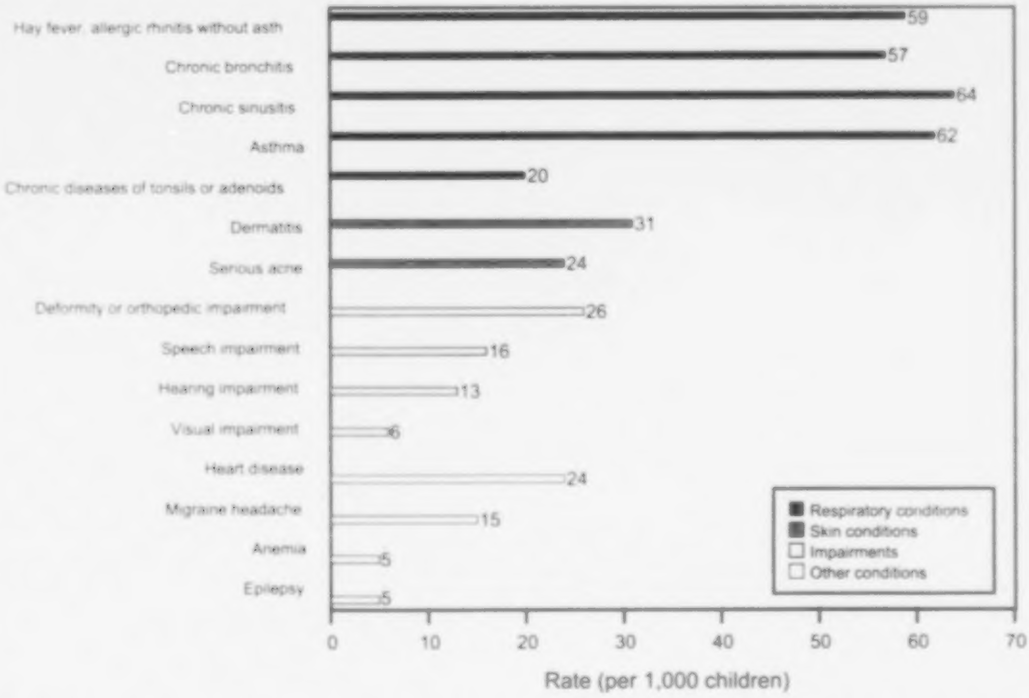
	Rate per 1,000							
	1984	1987	1990	1992	1993	1994	1995	1996
Respiratory conditions								
Hay fever, allergic rhinitis without asthma	61	64	57	71	57	61	66	59
Chronic bronchitis	50	62	53	54	59	55	54	57
Chronic sinusitis	47	58	57	69	80	65	76	64
Asthma	43	53	58	63	72	69	75	62
Chronic diseases of tonsils or adenoids	34	30	23	28	26	23	19	20
Skin conditions								
Dermatitis	39	32	31	41	36	38	35	31
Serious acne	26	26	26	25	28	29	26	24
Impairments								
Deformity or orthopedic impairment	35	36	29	33	29	28	30	26
Speech impairment	16	19	14	21	20	21	18	16
Hearing impairment	24	16	21	15	17	18	15	13
Visual impairment	9	10	9	10	7	9	7	6
Other conditions								
Heart disease	23	22	19	19	20	18	19	24
Migraine headache	11	8	14	13	13	16	13	15
Anemia	11	8	10	11	9	12	7	5
Epilepsy	7	4	4	3	5	5	4	5

[a] Chronic health conditions as defined in the National Health Interview Survey are conditions that either (a) were first noticed three months or more before the reference date of the interview; or (b) belong to a group of conditions (including heart diseases, diabetes, and others) that are considered chronic regardless of when they began. The prevalence estimates are based on reports by parents or other adult respondents in response to checklists administered in household interviews.

Sources: Unpublished data from the National Health Interview Survey, National Center for Health Statistics; Benson, V., and Marono, M.A. 1996. "Current Estimates from the National Health Interview Survey, 1995." *Vital Health Statistics* 10 (199), Tables 57 and 62. National Center for Health Statistics; also previous issues of this report [Series 10, Nos. 156, 166, 181, 189, 190, and 193 (Tables 57 and 62 in each)].

Figure HC 2.5

Selected chronic health conditions[a] for children under age 18 (rate per 1,000 children) in the United States: 1996



[a] Chronic health conditions as defined in the National Health Interview Survey are conditions that either (a) were first noticed three months or more before the reference date of the interview; or (b) belong to a group of conditions (including heart diseases, diabetes, and others) that are considered chronic regardless of when they began. The prevalence estimates are based on reports by parents or other adult respondents in response to checklists administered in household interviews.

Source: Unpublished data from the National Health Interview Survey, National Center for Health Statistics.

HC 2.6

OVERWEIGHT PREVALENCE AMONG CHILDREN AND ADOLESCENTS

Persons who are overweight in adolescence are at greater risk of being overweight as adults, and adults who are overweight are at higher risk of numerous health problems, including hypertension, coronary heart disease, gallbladder disease, noninsulin-dependent diabetes, and some cancers.[29] Because being overweight in childhood and adolescence increases the risk of being overweight in adulthood, the trends in overweight prevalence among children and youth have become an important public health concern. Overall, the percentage of children ages 6 through 17 who are overweight has increased more than twofold since the 1960s, with the largest increases seen since 1980 (see Table HC 2.6).[30]

Differences by Age. In the earliest period shown in Table HC 2.6 (1963-1965), 5 percent of children ages 6 through 11 were overweight, with this percentage rising to 13.6 percent in the last period (1988-1994). Similar increases are shown among older children ages 12 through 17, although overweight prevalence has been about two percentage points lower for older children in the later time periods.

Differences by Gender. In the latest time period (1988-1994), 14.7 percent of males ages 6 through 11 were overweight, compared with 12.6 percent of females; 2.4 percent of males ages 12 through 17 were overweight, compared with 10.5 percent of females.

Differences by Race. Overweight prevalence among male children (ages 6 through 11) and adolescents (ages 12 through 17) ranges within one percentage point between black and white males. The percentage of overweight black female children and adolescents is nearly six percentage points above that of their white peers (see Figure HC 2.6).

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[29] Troiano, R.P., Flegal, K.M., Kuczmarski, R.J., Campbell, S.M., and Johnson, C.L. 1995. "Overweight Prevalence and Trends for Children and Adolescents: The National Health and Nutrition Examination Surveys, 1963-1991." *Archives of Pediatrics and Adolescent Medicine* 149 (October).

[30] Overweight is defined as body mass index (BMI) at or above the sex- and age-specific 95th percentile BMI cutoff points calculated at 6-month age intervals for children ages 6 through 11 [from the 1963-65 National Health Examination Survey (NHES)] and for adolescents ages 12 through 17 (from the 1966-70 NHES). Age is at time of examination at mobile examination center. This definition differs from that reported in earlier versions of this report, which was based on children at or above the 85th percentile of BMI.

Table HC 2.6

Percentage of overweight[a] children and adolescents in the United States, by age, gender, and race:[b] selected years, 1963-1994

	1963-1965	1966-1970	1971-1974	1976-1980	1988-1994
Ages 6-11					
Total	5.0	—	5.5	7.6	13.6
Male	4.9	—	6.5	8.1	14.7
White	5.4	—	6.6	8.1	14.6
Black	1.7	—	5.6	8.6	15.1
Female	5.2	—	4.4	7.1	12.6
White	5.1	—	4.4	6.5	11.7
Black	5.3	—	4.5	11.5	17.4
Ages 12-17					
Total	—	5.0	6.2	5.6	11.4
Male	—	5.0	5.3	5.3	12.4
White	—	5.2	5.5	5.3	13.1
Black	—	3.6	4.4	6.0	12.1
Female	—	5.0	7.2	6.0	10.5
White	—	4.8	6.6	5.4	10.0
Black	—	6.4	10.5	10.2	16.1

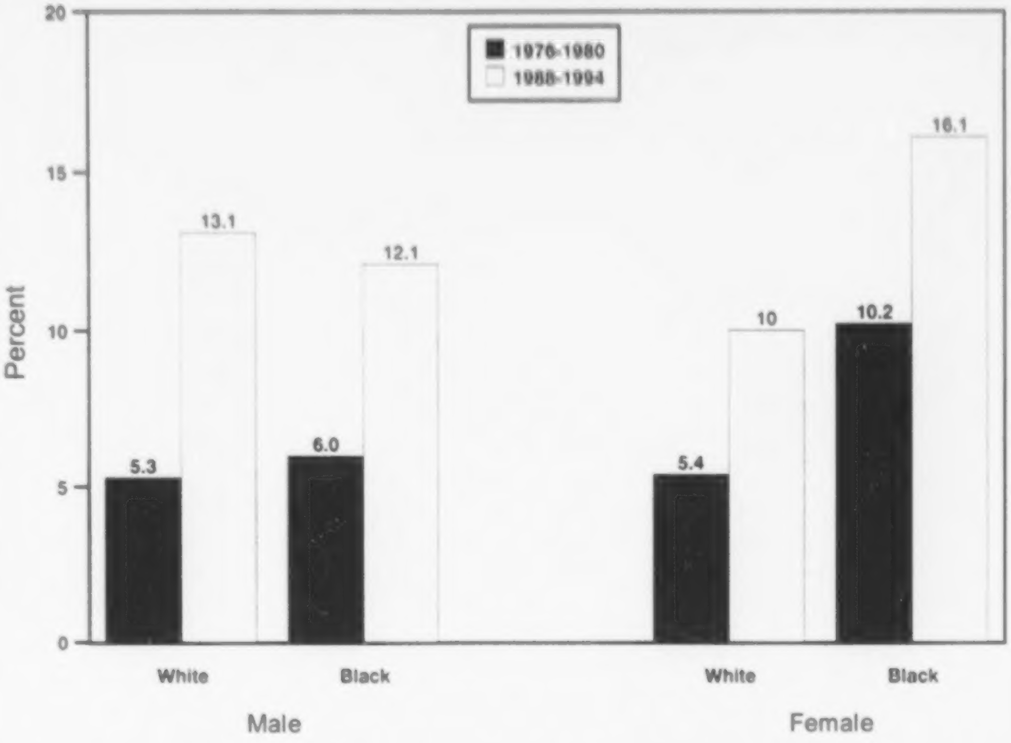
[a] Overweight is defined as body mass index (BMI) at or above the sex- and age-specific 95th percentile BMI cutoff points calculated at six-month age intervals for children ages 6 through 11 [from the 1963-1965 National Health Examination Survey (NHES)] and for adolescents ages 12 through 17 (from the 1966-70 NHES). Age is at time of examination at mobile examination center. This definition differs from that reported in earlier versions of this report, which was based on children at or above the 85th percentile of BMI.

[b] Totals for male and female children and adolescents include data for race groups not shown separately.

Sources: National Center for Health Statistics. 1998. *Health, United States, 1998 With Socioeconomic Status and Health Chartbook.* Hyattsville, Md.: (Table 71). Estimates were calculated from the National Health Examination Survey (1963-1965 for ages 6 through 11, and 1966-1970 for ages 12 through 17) and from the National Health and Nutrition Examination Survey (NHANES; 1971-1974 for NHANES I, 1976-1980 for NHANES II, and 1988-1994 for NHANES III).

Figure HC 2.6

Percentage of overweight[a] adolescents (ages 12 through 17) in the United States, by gender and race: 1976-1980 and 1988-1994



[a] Overweight is defined as body mass index (BMI) at or above the sex- and age-specific 95th percentile BMI cutoff points calculated at six-month age intervals for children ages 6 through 11 [from the 1963-1965 National Health Examination Survey (NHES)] and for adolescents ages 12 through 17 (from the 1966-70 NHES). Age is at time of examination at mobile examination center. This definition differs from that reported in earlier versions of this report, which was based on children at or above the 85th percentile of BMI.

Sources: National Center for Health Statistics. 1998. *Health, United States, 1998 With Socioeconomic Status and Health Chartbook*. Hyattsville, Md.: (Table 71). Estimates were calculated from the National Health Examination Survey (1963-1965 for ages 6 through 11, and 1966-1970 for ages 12 through 17) and from the National Health and Nutrition Examination Survey (NHANES; 1971-1974 for NHANES I, 1976-1980 for NHANES II, and 1988-1994 for NHANES III).

HC 2.7

ABUSE AND NEGLECT

Abuse and neglect cause physical and/or emotional harm to children. They can produce short-term psychological consequences that range from poor peer relations to violent behavior, as well as untold long-term psychological and economic consequences when children reach adulthood.[11] They can result in serious injury or, in extreme cases, death.

According to data from the most comprehensive annual data collection efforts undertaken to date, there were 965,623 child victims of maltreatment in 1997 as measured by the estimated total number of incidents[12] that were substantiated or indicated[13] by child welfare authorities (see Table HC 2.7). Of those cases, 25 percent were classified as physical abuse, 12 percent as sexual abuse, 55 percent as neglect, 2 percent as medical neglect, 6 percent as emotional maltreatment, and 12 percent as "other" or "unknown" types of maltreatment.[14]

Between 1990 and 1994, the total estimated number of victims increased by 20 percent from 860,576 to 1,029,118 children. However, between 1994 and 1997, the total estimated number of victims fell by 6 percent to 965,623 children.

The number of victims shown in Table HC 2.7 may substantially understate the *actual* number of victims of maltreatment. In order for a child to be included in these counts, a report must first be made to child welfare authorities, an investigation undertaken, and a determination made that maltreatment occurred or was indicated.

Another data source, the third National Incidence Study of Child Abuse and Neglect, yields a much higher estimate of the total number of cases of child maltreatment—possibly as high as 2.8 million children in 1993. This study includes (1) all cases determined to be substantiated or indicated by child protective services[15] and (2) cases known to community professionals but not necessarily reported to child protective services (in a representative sample of counties).

Differences by Race. Black children, who account for about 15 percent of the child population, constituted 27 percent of all child abuse and neglect victims in 1996. Whites accounted for 53 percent of all victims and Hispanics 11 percent of all victims (see Table HC 2.7).

Differences by Age. No age group accounts for an obviously disproportionate share of abuse and neglect victims. In 1997, infants under age 1 accounted for 7 percent of all victims; children ages 1 to 5 accounted for 31 percent; children ages 6 to 12 accounted for 40 percent; and children ages 13 to 17 accounted for 19 percent (see Table HC 2.7).

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[11] Many studies have demonstrated a correlation between child abuse and neglect and serious adult problems, including violence, incarceration, and mental illness. However, these studies have not been able to separate the effects of child abuse and neglect from other factors that are correlated with it, including poverty, education, parenting skills, etc.

[12] In most states, a child is counted each time he or she is the subject of a substantiated or indicated report of maltreatment, meaning that a child who is involved in more than one incident per year is counted more than once.

[13] Some states have a classification of "indicated", which means there is sufficient reason to suspect that a child may have been maltreated or is at risk of maltreatment, but the allegation cannot be substantiated to the level of evidence required by State law.

[14] These percentages add up to over 100 because individual cases may include more than one type of maltreatment.

[15] According to the National Incidence Study, in 1993, only 28 percent of maltreatment cases identified by the study were investigated—a significant decrease from the 44 percent investigated in 1986. The cause of this drop is not clear.

Table HC 2.7

Victims of child maltreatment in the United States. Substantiated and indicated[a] incidences by type of maltreatment, race/ethnicity,[b] gender, and age:[c] 1990-1997

	1990	1991	1992	1993	1994	1995	1996	1997
Total								
Number[d]	860,576	911,689	994,655	1,026,331	1,029,118	1,005,511	1,011,973	965,623
Type of maltreatment (% of total)								
Physical Abuse	27	26	23	24	24	24	24	25
Neglect	49	46	50	49	52	52	52	55
Medical Neglect[e]	—	2	3	2	2	3	3	2
Sexual Abuse	17	16	14	14	14	13	12	12
Psychological or Emotional Abuse or Neglect	7	6	5	5	5	4	6	6
Other and Unknown Maltreatment	9	9	20	15	16	16	18	12
Race/ethnicity[b] (% of total)								
White	54	54	52	53	55	55	53	—
Black	25	26	26	26	28	28	27	—
Hispanic	9	9	9	9	10	10	11	—
Gender (% of total)								
Male	45	44	44	44	47	47	48	47
Female	51	51	50	51	52	53	52	52
Age (% of total)								
Under age 1	7	7	7	7	7	7	7	7
Ages 1-5	30	31	31	31	33	33	32	31
Ages 6-12	36	37	37	37	38	39	40	40
Ages 13-17	19	19	19	20	20	20	20	19
Ages 18+/unknown	8	6	6	5	3	2	2	3

[a] Some states have a classification of "indicated" when there is sufficient reason to suspect that a child may have been maltreated or is at risk of maltreatment, but the allegation cannot be substantiated to the level of evidence required by state law.

[b] Persons of Hispanic origin may be of any race. Estimates for whites and blacks exclude persons of Hispanic origin except for the portion of the estimate generated by states that do not report Hispanic origin.

[c] Some states have included persons ages 18 and older in their statistics on child abuse and neglect. Because these persons are considered victims of child maltreatment under the laws of their state, statistics in this table include these persons. Such individuals accounted for fewer than one percent of all victims.

[d] These totals represent the estimated number of victims for all 50 states and the District of Columbia. These are adjusted estimates based on all reporting states, which has varied in number between 41 and 49 over this time period. The previous edition of this publication reported the numbers from reporting states only.

[e] Medical neglect was not reported in 1990.

Note: All data presented are from the National Child Abuse and Neglect Data System (NCANDS), which annually collects information from state child protective agencies. Because state agencies may modify or correct data submitted in a previous year, some findings differ from previously published data.

Note: Subgroup percentages may be based on data from fewer states than the number of states contributing to the total because all states do not provide demographic information.

Sources: Unpublished estimates from NCANDS Technical Assistance Team, Walter R. McDonald and Associates, under contract to the Administration for Children and Families, U.S. Department of Health and Human Services.

HC 2.8

SUICIDAL TEENS: YOUTH WHO HAVE THOUGHT SERIOUSLY ABOUT OR ATTEMPTED SUICIDE

Suicide is a major cause of death among youth (see Section HC 1.5). Attempted suicide has been related to mental health problems including depression and adjustment or stress reactions, as well as to substance abuse.[36]

In 1997, 21 percent of youth in grades 9 through 12 report having seriously considered suicide during the previous 12 months (see Table HC 2.8.A). During the same time period, 8 percent report having actually attempted suicide during the previous year (see Table HC 2.8.B). These rates are considerably higher than the proportion of youth who actually commit suicide (see Section HC 1.5).

Differences by Race and Hispanic Origin.[37] In 1997, black youth report somewhat lower rates of considering suicide in comparison with their Hispanic peers. Twenty percent of whites report having considered suicide in the previous year. Rates of reported attempted suicide range from 6 percent for whites to 11 percent for Hispanics.

Differences by Gender. In 1997, female youth were more likely than male youth to report having thought seriously about suicide (27 percent versus 15 percent) and having attempted suicide (12 percent versus 5 percent) during the previous year (see Figure HC 2.8). However, the rate of actual suicides, particularly among teens ages 15 to 19, is considerably higher for males than for females, as discussed in Section HC 1.5.

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[36] Alcohol, Drug Abuse, and Mental Health Administration. 1990. *Report of the Secretary's Task Force on Youth Suicide.* Publication No. (ADM)899-1621. Washington, D.C.: U.S. Department of Health and Human Services, 1989. Cited in *Healthy People 2000: National Health Promotion and Disease Prevention Objectives, Conference Edition.* U.S. Department of Health and Human Services.

[37] Estimates for white and black youth exclude Hispanics of those races.

Table HC 2.8.A

Percentage of teens in the United States in grades 9 through 12 who report having seriously considered suicide in the previous 12 months, by gender, grade, and race and Hispanic origin:[a] selected years, 1990-1997

	1990	1991	1993	1995	1997
Total	27	28	24	24	21
Male	21	20	19	18	15
Female	34	36	30	30	27
Grade					
9	30	28	24	26	22
10	26	28	25	25	22
11	29	31	25	26	21
12	23	25	23	20	18
Race and Hispanic origin[a]					
White, non-Hispanic	28	29	24	25	20
Black, non-Hispanic	20	20	20	20	16
Hispanic	30	26	26	25	23

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Centers for Disease Control and Prevention. "1990-1991 Youth Risk Behavior Surveillance System." In *Chronic Disease and Health Promotion Reporting from the MMWR*, Table 1, p. 9; Table 1, p. 66; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 10, p. 32; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 10, p. 41; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 10, p. 47.

Table HC 2.8.B

Percentage of teens in the United States in grades 9 through 12 who report having attempted suicide in the previous 12 months, by gender, grade, and race and Hispanic origin:[a] selected years, 1990-1997

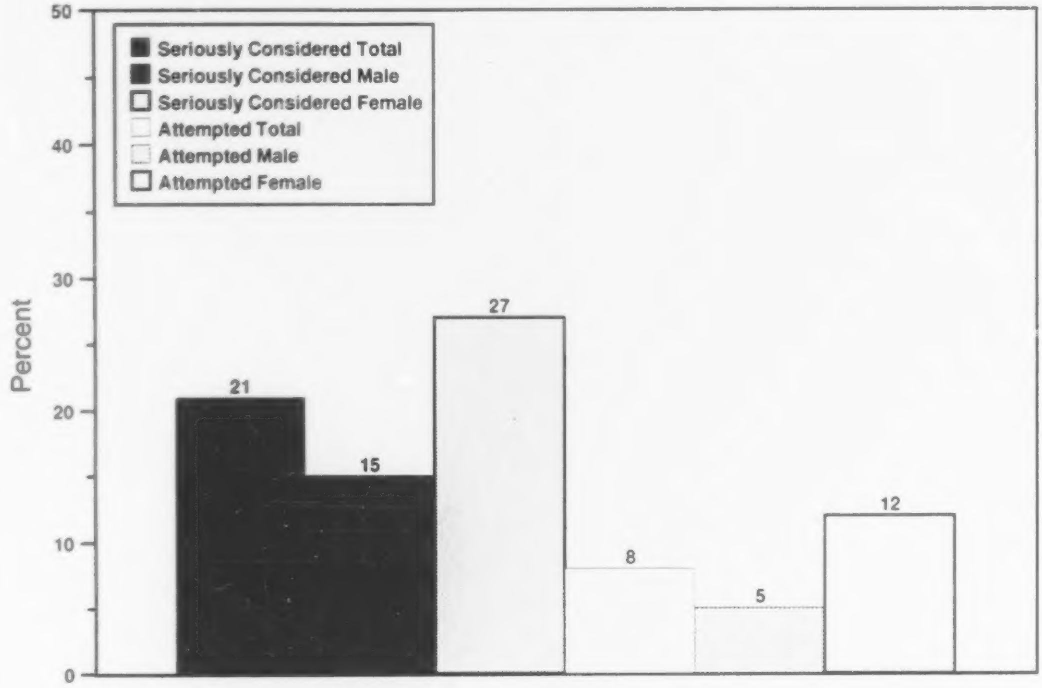
	1990	1991	1993	1995	1997
Total	8	7	9	9	8
Male	6	4	5	6	5
Female	10	11	13	12	12
Grade					
9	9	9	10	11	11
10	9	8	9	10	9
11	8	6	8	9	8
12	7	6	7	6	5
Race and Hispanic origin[a]					
White, non-Hispanic	8	7	8	8	6
Black, non-Hispanic	7	7	8	10	7
Hispanic	12	8	14	13	11

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Centers for Disease Control and Prevention. "1990-1991 Youth Risk Behavior Surveillance System." In *Chronic Disease and Health Promotion Reporting from the MMWR*, Table 1, p. 9; Table 1, p. 66; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 10, p. 32; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 10, p. 41; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 10, p. 47.

Figure HC 2.8

Percentage of teens in the United States in grades 9 through 12 who report having seriously considered suicide or attempted suicide in the previous 12 months, by gender: 1997



Sources: Centers for Disease Control and Prevention. Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 10, p. 47.

HC 2.9

ACTIVITY LIMITATIONS

Activity limitations refer to long-term reductions in activities resulting from a chronic disease or impairment.[38] Two types of activity limitations are examined here: limitations in major activities and limitations in any activity. A person is classified as having an activity limitation if he or she reports (1) an inability to perform the major activity for a person in his or her age group, (2) being able to perform the major activity but being limited in the kind or amount of this activity, or (3) not being limited in the major activity but being limited in the kind or amount of other activities. For children under age 5, the major activity consists of ordinary play. For children ages 5 to 17, the major activity is attending school. Children are classified as being limited in *a major activity* if they are unable to engage in the major activity or are limited in the kind or amount of this activity (classifications (1) and (2) above).

In 1996, 6.1 percent of all children under age 18 had a chronic condition that limited their activity (see Table HC 2.9.A), while 4.4 percent were limited in a major activity due to a chronic condition (see Table HC 2.9.B).

Differences by Age. Children ages 5 through 17 are more than twice as likely to experience an activity limitation due to a chronic condition than are younger children. In 1996, 2.6 percent of children under age 5 had an activity limitation due to a chronic condition, compared with 7.5 percent of older children. These differences by age can be seen across family income, gender, race, and Hispanic origin categories.

Differences by Gender. Males have consistently accounted for a greater percentage of children under 18 with an activity limitation due to a chronic condition. In 1996, 7.4 percent of males, compared with 4.7 percent of females, had activity limitations that were caused by a chronic condition (see Table HC 2.9.A). Looking only at limitations in *major activities* in 1996, 5.5 percent of males under age 18 had such limitations, compared with 3.2 percent of females (see Figure HC 2.9.B).

Differences by Race and Hispanic Origin.[39] In 1996, 8.4 percent of black children under age 18 had any activity limitation, compared with 5.7 percent of white children and 6.3 percent of Hispanic children. Black children also suffered from restrictions in their major activities more frequently than white children (see Figure HC 2.9.B).

Differences by Income. Children under age 18 who were below the poverty line were 83 percent more likely to have an activity limitation than non-poor children in 1996 (see Figure HC 2.9 A). Even for children under age 5, who in general have fewer limitations than older children, the disparity between the poor and non-poor incidence of activity limitation is striking: 1.7 percent of non-poor children and 4.9 percent of poor children were limited in some activity. Children ages 5 to 17 in families with annual incomes under $20,000 are almost twice as likely to be limited in their activities as children in families with annual incomes of $20,000 or more (see Table HC 2.9.A).

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[38] A disease or impairment is classified as chronic if it has been apparent for at least three months or is a new condition that will ordinarily last for more than three months.

[39] Estimates for white and black children exclude Hispanics of those races.

SEE TABLE FOLLOWING PAGES

Table HC 2.9.A (Part 1)

Percentage of children under age 18 in the United States with any activity limitation[a] due to a chronic condition,[b] by family income, age, gender, poverty status, and race and Hispanic origin:[c] selected years 1984-1996

	1984	1990	1991	1992	1993	1994	1995	1996
Under 18								
Total	5.0	4.9	5.8	6.1	6.6	6.7	6.0	6.1
Annual family income								
Under $20,000	—	—	—	—	—	—	—	9.7
$20,000 or more	—	—	—	—	—	—	—	5.0
Gender								
Male	5.9	5.6	6.8	7.1	7.8	7.9	7.4	7.4
Female	4.0	4.2	4.7	5.0	5.3	5.6	4.6	4.7
Race and Hispanic origin[c]								
White, non-Hispanic	4.9	5.0	5.8	6.0	6.7	6.6	6.0	5.7
Black, non-Hispanic	5.6	5.5	6.7	7.5	7.7	8.9	7.3	8.4
Hispanic	4.7	4.1	5.5	5.3	5.6	5.7	5.8	6.3
Poverty status								
Below poverty	7.1	6.7	8.8	9.2	9.5	9.7	9.2	9.7
At or above poverty	4.4	4.6	5.1	5.3	5.9	6.0	5.4	5.3
Under 5								
Total	2.5	2.2	2.4	2.8	2.8	3.1	2.7	2.6
Annual family income								
Under $20,000	—	—	—	—	—	—	—	4.2
$20,000 or more	—	—	—	—	—	—	—	1.7
Gender								
Male	2.7	2.6	2.7	3.3	3.1	3.4	3.3	3.3
Female	2.3	1.7	2.1	2.2	2.5	2.7	2.0	1.7
Race and Hispanic origin[c]								
White, non-Hispanic	2.3	2.1	2.4	2.5	2.4	2.7	2.7	1.8
Black, non-Hispanic	3.3	2.9	3.2	4.2	4.7	5.0	3.5	4.8
Hispanic	2.5	2.0	1.8	2.5	2.7	3.1	2.5	3.5
Poverty status								
Below poverty	4.0	3.0	4.3	4.5	4.3	5.2	3.9	4.9
At or above poverty	2.0	2.0	2.0	2.3	2.4	2.5	2.4	1.7

[a] Persons are classified in terms of the major activity usually associated with their particular age group. The major activities for children are ordinary play for children under 5 years of age and attending school for those 5-17 years of age. A person is classified as having an activity limitation if he or she is unable to perform the major activity, is able to perform the major activity but is limited in the kind or amount of this activity, or is not limited in the major activity but is limited in the kind or amount of other activities.

[b] A condition is considered chronic if the respondent indicates it was first noticed more than three months before the reference date of the interview, or it is a type of condition that ordinarily has a duration of more than three months.

[c] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data from the National Health Interview Survey, National Center for Health Statistics (provided by the Centers for Disease Control and Prevention and as published in *America's Children: Key National Indicators of Well-Being, 1998*, Federal Interagency Forum on Child and Family Statistics, Table HEALTH2, available online at http://childstats.gov/ac1998/xhealth2.htm); Benson, V., and Marono, M.A. 1995. "Current Estimates from the National Health Interview Survey, 1995." *Vital Health Statistics* 10 (199). National Center for Health Statistics, 1995. Also previous issues of this report [Series 10, Nos. 181, 184, 189, and 193)].

Table HC 2.9.A (Part 2)

Percentage of children under age 18 in the United States with any activity limitation[a] due to a chronic condition,[b] by family income, age, gender, poverty status, and race and Hispanic origin:[c] selected years 1984-1996

	1984	1990	1991	1992	1993	1994	1995	1996
Ages 5-17								
Total	6.1	6.1	7.2	7.5	8.1	8.2	7.4	7.5
Annual family income								
Under $20,000	—	—	—	—	—	—	—	11.9
$20,000 or more	—	—	—	—	—	—	—	6.1
Gender								
Male	7.3	6.9	8.5	8.7	9.8	9.7	9.0	9.0
Female	4.8	5.2	5.9	6.2	6.4	6.7	5.6	5.9
Race and Hispanic origin[c]								
White, non-Hispanic	6.0	6.2	7.1	7.4	8.4	8.1	7.2	7.1
Black, non-Hispanic	6.7	6.7	8.2	9.0	9.0	10.6	8.9	9.8
Hispanic	5.8	5.1	7.2	6.7	7.1	7.0	7.5	7.7
Poverty status								
Below poverty	8.7	8.5	11.0	11.7	12.2	11.9	11.8	12.1
At or above poverty	5.5	5.6	6.4	6.6	7.2	7.4	6.5	6.6

[a] Persons are classified in terms of the major activity usually associated with their particular age group. The major activities for children are ordinary play for children under 5 years of age and attending school for those 5-17 years of age. A person is classified as having an activity limitation if he or she is unable to perform the major activity, is able to perform the major activity but is limited in the kind or amount of this activity, or is not limited in the major activity but is limited in the kind or amount of other activities.

[b] A condition is considered chronic if the respondent indicates it was first noticed more than three months before the reference date of the interview, or it is a type of condition that ordinarily has a duration of more than three months.

[c] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data from the National Health Interview Survey, National Center for Health Statistics (provided by the Centers for Disease Control and Prevention and as published in *America's Children: Key National Indicators of Well-Being, 1998*, Federal Interagency Forum on Child and Family Statistics, Table HEALTH2, available online at http://childstats.gov/ac1998/xhealth2.htm); Benson, V., and Marono, M.A. 1995. "Current Estimates from the National Health Interview Survey, 1995." *Vital Health Statistics* 10 (199). National Center for Health Statistics, 1995. Also previous issues of this report [Series 10, Nos. 181, 184, 189, and 193)].

Table HC 2.9.B

Percentage of children under age 18 in the United States with any activity limitation in a major activity[a] due to a chronic condition,[b] by gender and race: selected years, 1983-1996

	1983	1985	1990	1991	1992	1993	1994	1995	1996
Total	3.5	3.7	3.6	4.2	4.4	4.6	4.9	4.3	4.4
Gender									
Male	4.2	4.4	4.2	5.0	5.2	5.6	6.0	5.5	5.5
Female	2.8	2.9	3.0	3.3	3.7	3.5	3.8	3.1	3.2
Race									
White	3.4	3.5	3.5	4.1	4.3	4.5	4.7	4.2	4.1
Black	4.5	4.6	4.2	5.2	6.0	5.7	6.7	5.5	6.2

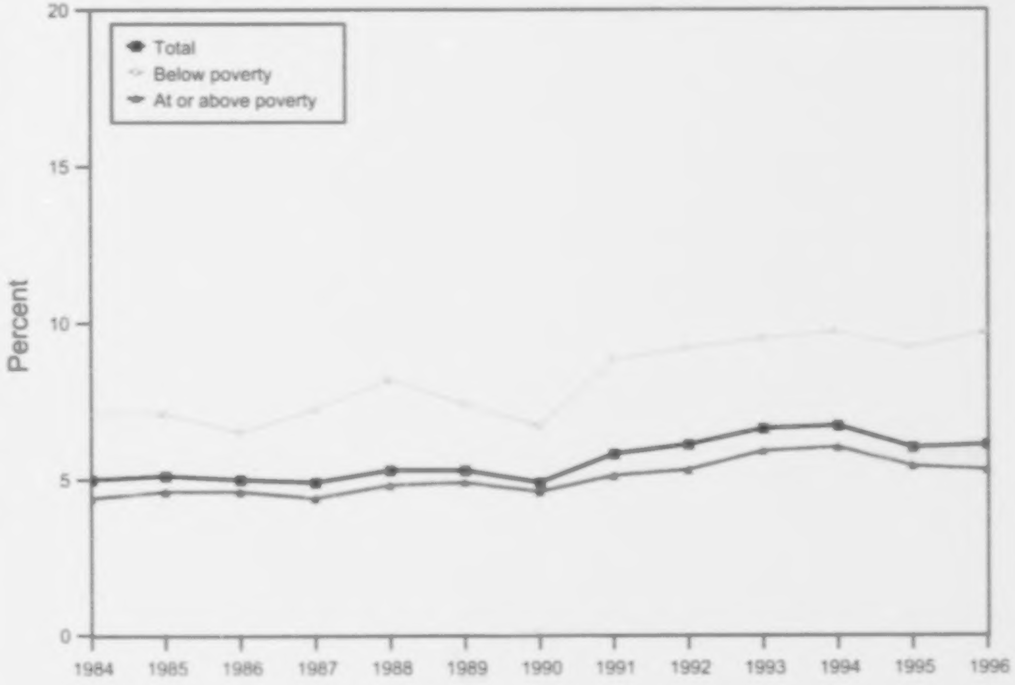
[a] Persons are classified in terms of the major activity usually associated with their particular age group. The major activities for children are ordinary play for children under 5 years of age and attending school for those 5-17 years of age. A person is classified as having an activity limitation in a major activity if he or she is unable to perform the major activity or is able to perform the major activity but is limited in the kind or amount of this activity.

[b] A condition is considered chronic if the respondent indicates it was first noticed more than three months before the reference date of the interview, or it is a type of condition that ordinarily has a duration of more than three months.

Sources: Unpublished data from the National Health Interview Survey, National Center for Health Statistics; Benson, V., and Marono, M.A. 1996. "Current Estimates from the National Health Interview Survey, 1995." *Vital Health Statistics* 10 (199), Table 67. National Center for Health Statistics. Also previous issues of this report. [Series 10, Nos. 154, 163, 181, 184, 189, 190, and 193 (Table 67 in each)].

Figure HC 2.9.A

Percentage of children under age 18 in the United States with any activity limitation[a] due to a chronic condition,[b] by poverty status: 1984-1996



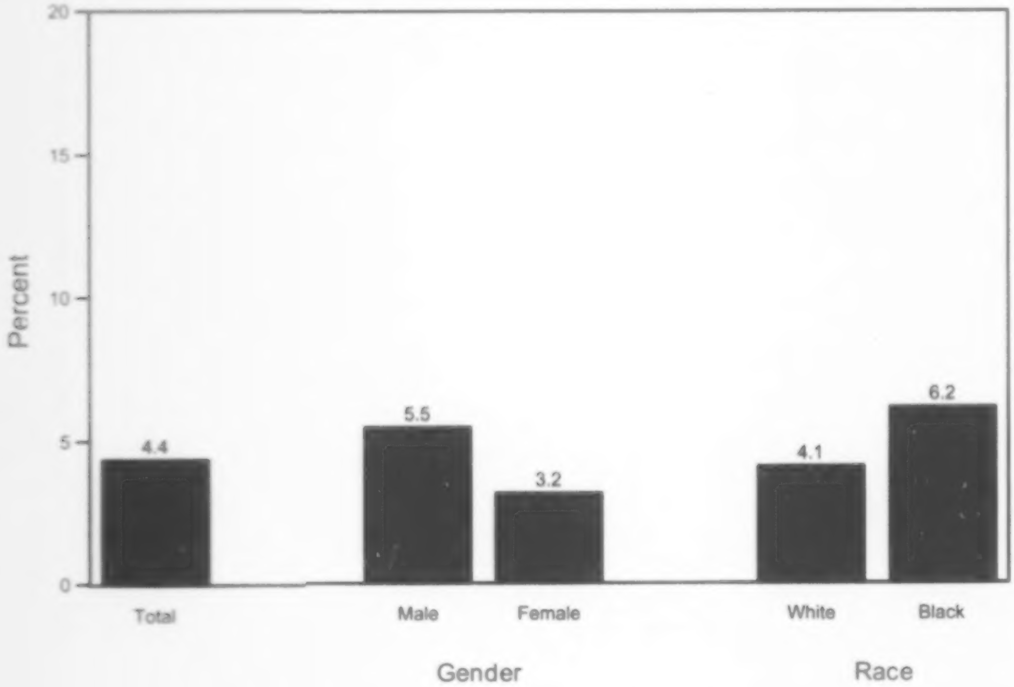
[a] Persons are classified in terms of the major activity usually associated with their particular age group. The major activities for children are ordinary play for children under 5 years of age and attending school for those 5-17 years of age. A person is classified as having an activity limitation if he or she is unable to perform the major activity, is able to perform the major activity but is limited in the kind or amount of this activity, or is not limited in the major activity but is limited in the kind or amount of other activities.

[b] A condition is considered chronic if the respondent indicates it was first noticed more than three months before the reference date of the interview, or it is a type of condition that ordinarily has a duration of more than three months.

Sources: Data from the National Health Interview Survey, National Center for Health Statistics (provided by the Centers for Disease Control and Prevention and as published in *America's Children: Key National Indicators of Well-Being, 1998*, Federal Interagency Forum on Child and Family Statistics, Table HEALTH2, available online at http://childstats.gov/ac1998/xhealth2.htm); Benson, V., and Marono, M.A. 1995. "Current Estimates from the National Health Interview Survey, 1995." *Vital Health Statistics* 10 (199). National Center for Health Statistics. Also previous issues of this report [Series 10, Nos. 181, 184, 189, and 193)].

Figure HC 2.9.B

Percentage of children under age 18 in the United States with an activity limitation in a major activity[a] due to a chronic condition,[b] by gender and by race: 1996



[a] Persons are classified in terms of the major activity usually associated with their particular age group. The major activities for children are ordinary play for children under 5 years of age and attending school for those 5-17 years of age. A person is classified as having an activity limitation in a major activity if he or she is unable to perform the major activity or is able to perform the major activity but is limited in the kind or amount of this activity.

[b] A condition is considered chronic if the respondent indicates it was first noticed more than three months before the reference date of the interview, or it is a type of condition that ordinarily has a duration of more than three months.

Source: Unpublished data from the National Health Interview Survey, National Center for Health Statistics.

HC 2.10

LEAD EXPOSURE

Exposure to lead has long been recognized as a serious health hazard, particularly for infants, toddlers, and preschool-age children, whose developing nervous systems are sensitive to lead. Research during the past two decades has shown that adverse health effects can occur from blood lead levels (BLLs) that had previously been considered safe. Based on this research, the Centers for Disease Control and Prevention now considers BLLs at least as low as 10 micrograms per deciliter of blood as hazardous for children ages 1 to 5.[40]

Dramatic Decreases in Blood Lead Levels. The percentage of very young children who have elevated blood lead levels declined dramatically in the 1980s (see Figure HC 2.10). Data gathered between 1976 and 1980 revealed that 88.2 percent of children between the ages of 1 and 5 had blood lead levels that have been associated with adverse health effects. Subsequent data gathered between 1988 and 1991 found that only 8.9 percent of children had elevated levels of lead in their blood. Data gathered between 1991 and 1994 reflect that 4.4 percent of children ages 1 through 5 had elevated blood lead levels. These dramatic decreases have been attributed primarily to the removal of lead from gasoline and from soldered food and soft drink cans.[41] Other contributing factors have been the ban on leaded paint for residential use since the 1970s, the ban on lead in solder for household plumbing, and the ongoing screening of children for lead exposure.

Populations with Elevated Blood Lead Levels. Non-Hispanic black children, poor and near-poor children, and children living in the central areas of large cities face considerably higher risks of being exposed to high levels of lead than other children.[42] In the latest time period shown (1991-1994):

- Among non-Hispanic black children, 11.2 percent had elevated blood lead levels, compared with 2.3 percent of non-Hispanic white children (see Table HC 2.10.A).
- Low-income children (in families with annual incomes less than or equal to 130 percent of the poverty threshold), at 8 percent, had the highest percentage of elevated blood lead levels, compared with 1.9 percent of children in middle-income families (with family incomes between 130 and 350 percent of the poverty level) and 1 percent of children in high-income families (with family incomes above 350 percent of the poverty level) (see Table HC 2.10.B).
- The percentage of children living in large urban areas (populations of at least one million) with elevated blood lead levels was 5.4 percent, compared with 3.3 percent of children living in other areas (see Table HC 2.10.B).

Differences by Year Housing Built. Deteriorating lead-based paint and lead-contaminated dust in older homes are the primary source of lead exposure for children in the United States today.[43] The prevalence of elevated blood lead levels is lower for children who live in housing built after 1973.[44] Nevertheless, the higher prevalence of elevated blood lead levels among non-Hispanic black children and children in families with low income can still be seen across the categories reflecting age of housing (see Tables HC 2.10.A and HC 2.10.B).

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[40] Centers for Disease Control and Prevention. 1991. *Preventing Lead Poisoning in Young Children: A Statement by the Centers for Disease Control and Prevention.* Atlanta, Ga.: U.S. Department of Health and Human Services, Public Health Service.

[41] Pirkle, J.L., Brody, D.J., Gunter, E.W., Kramer, R.A., Paschal, D.C., Flegal, K.M., and Matte, T.D. 1994. "The Decline in Blood Lead Levels in the United States: The National Health and Nutrition Examination Surveys (NHANES)." *JAMA* 272 (4): 284-291.

[42] Centers for Disease Control and Prevention. February 21, 1997. "Update: Blood Lead Levels—United States, 1991-1994." *Morbidity and Mortality Weekly Report* 46 (7).

[43] Centers for Disease Control and Prevention. February 21, 1997. "Update: Blood Lead Levels—United States, 1991-1994." *Morbidity and Mortality Weekly Report* 46 (7); Pirkle, J.L., Brody, D.J., Gunter, E.W., Kramer, R.A., Paschal, D.C., Flegal, K.M., and Matte, T.D. 1994. "The Decline in Blood Lead Levels in the United States: The National Health and Nutrition Examination Surveys (NHANES)." *JAMA* 272 (4): 284-291.

[44] Centers for Disease Control and Prevention. February 21, 1997. "Update: Blood Lead Levels—United States, 1991-1994." *Morbidity and Mortality Weekly Report* 46 (7).

Table HC 2.10.A

Percentage of children ages 1 through 5 in the United States with blood lead levels greater than or equal to 10 micrograms per deciliter, by age, race/ethnicity, poverty status, and age of housing:[a] selected years, 1976-1994[b]

	1976-1980	1988-1991	1991-1994
All children ages 1-5[c]	88.2	8.9	4.4
Ages 1-2	88.3	11.5	5.9
Ages 3-5	88.1	7.3	3.5
Race/ethnicity			
White, non-Hispanic	85.0	5.5	2.3
Black, non-Hispanic	97.7	20.6	11.2
Poverty status			
Below poverty	94.2	16.7	8.9
At or above poverty	86.9	5.3	2.1
Year housing built			
Before 1973	—	11.9	6.0
After 1973	—	4.9	1.6

[a] Estimates for whites and blacks exclude Hispanics of those races.

[b] Constraints of the survey design of NHANES III (the Third National Health and Nutrition Examination Survey) preclude statistical testing for the differences in weighted geometric mean blood lead levels (BLLs) and the prevalence of elevated BLLs from Phase 1 to Phase 2. Data are presented for descriptive purposes; however, comparisons between phases should be made with caution.

[c] Totals include children ages 1 through 5 of all race/ethnicity groups beyond those shown separately.

Sources: Centers for Disease Control and Prevention. February 21, 1997. "Update: Blood Lead Levels—United States, 1991-1994." *Morbidity and Mortality Weekly Report* 46 (7), Tables 1 and 2; Pirkle, J.L., Brody, D.J., Gunter, E.W., Kramer, R.A., Paschal, D.C., Flegal, K.M., and Matte, T.D. 1994. "The Decline in Blood Lead Levels in the United States: The National Health and Nutrition Examination Surveys (NHANES)." *JAMA* 272 (4): 284-291, Table 2; Brody, D.J., Pirkle, J.L., Kramer, R.A., Flegal, K.M., Matte, T.D., Gunter, E.W., and Paschal, D.C. 1994. "Blood Lead Levels in the U.S. Population: Phase 1 of the Third National Health and Nutrition Examination Survey (NHANES III, 1988 to 1991)." *JAMA* 272 (4): 277-283, Tables 3 and 4. Also unpublished tabulations based on NHANES III provided by the Centers for Disease Control, and data as published in *America's Children: Key National Indicators of Well-Being, 1998.* Federal Interagency Forum on Child and Family Statistics, Washington, D.C.. U.S. Government Printing Office. Table SPECIAL1.

Table HC 2.10.B

Percentage of children ages 1 through 5 in the United States with blood lead levels greater than or equal to 10 micrograms per deciliter, by year housing built, race and ethnicity,[a] family income,[b] and urban status:[c] selected years, 1991-1994 (combined)

	Total[d]	Year housing built		
		Before 1946	During 1946-1973	After 1973
Total[d]	4.4	8.6	4.6	1.6
Race/ethnicity				
White, non-Hispanic	2.3	5.6	1.4	1.5
Black, non-Hispanic	11.2	21.9	13.7	3.4
Annual family income				
Low	8.0	16.4	7.3	4.3
Middle	1.9	4.1	2.0	0.4
High	1.0	0.9	2.7	*
Urban status				
Population 1 million or more	5.4	11.5	5.8	0.8
Population less than 1 million	3.3	5.8	3.1	2.5

[a] Estimates for whites and blacks exclude Hispanics of those races.

[b] Low income was defined as total family income for the year of the interview below 130 percent of the federal poverty threshold, middle as between 130 and 350 percent, and high as over 350 percent. Persons with data missing for income were not included in the analysis of income.

[c] Urban status was based on U.S. Department of Agriculture codes that classify counties by total population and proximity to major metropolitan areas, and was divided into two categories: metropolitan areas with a population greater than or equal to 1 million, and metropolitan and nonmetropolitan areas with a population less than 1 million.

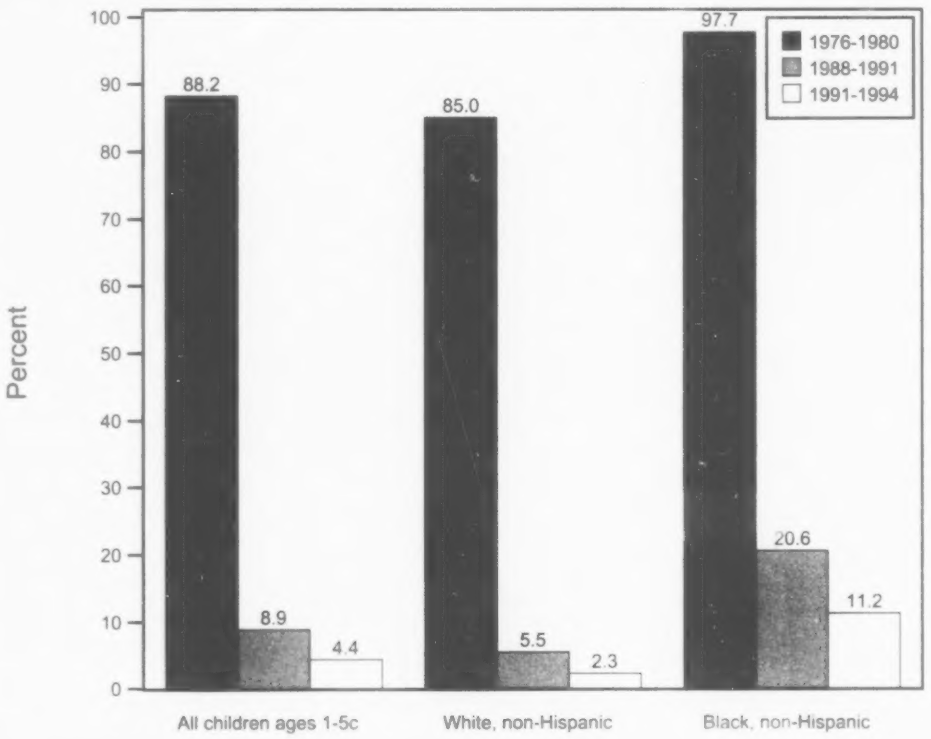
[d] Totals include children ages 1 through 5 of all race/ethnicity groups beyond those shown separately.

*No children in the sample had these characteristics; however, the true estimate for this population group is probably larger than zero.

Source: Centers for Disease Control and Prevention. February 21, 1997. "Update: Blood Lead Levels—United States, 1991-1994." *Morbidity and Mortality Weekly Report* 46 (7), Table 2. Data from the Third National Health and Nutrition Examination Survey, Phase 2.

Figure HC 2.10

Percentage of children ages 1 through 5 in the United States with blood lead levels greater than or equal to 10 micrograms per deciliter, by race/ethnicity:[a] selected years, 1976-1994[b]



[a] Estimates for whites and blacks exclude Hispanics of those races.

[b] Constraints of the survey design of NHANES III preclude statistical testing for the differences in weighted geometric mean blood lead levels (BLLs) and the prevalence of elevated BLLs from Phase 1 to Phase 2. Data are presented for descriptive purposes; however, comparisons between phases should be made with caution.

[c] Totals include children ages 1 through 5 of all race/ethnicity groups beyond those shown separately.

Sources: Centers for Disease Control and Prevention. February 21, 1997. "Update: Blood Lead Levels—United States, 1991-1994." *Morbidity and Mortality Weekly Report* 46 (7), Tables 1 and 2; Pirkle, J.L., Brody, D.J., Gunter, E.W., Kramer, R.A., Paschal, D.C., Flegal, K.M., and Matte, T.D. 1994. Table 2 and page 288 in "The Decline in Blood Lead Levels in the United States: The National Health and Nutrition Examination Surveys (NHANES)." *JAMA* 272 (4): 284-291.

HC 2.11

SERIOUS VIOLENT VICTIMIZATION OF TEENS

Serious violent crimes include aggravated assaults,[45] rape, and robbery (stealing by force or threat of violence). In order to keep track of the incidence of these and other crimes, the Bureau of Justice Statistics has been administering the National Crime Victimization Survey on an annual basis since 1972.

Among youth ages 12 to 17, rates of victimization for violent crimes have remained relatively constant from 1980 to 1994, ranging from 34.1 to 43.8 per thousand.[46] Between 1994 and 1997, the rate dropped from 41.3 to 27.1 per 1,000 (see Table HC 2.11).

Differences by Gender. Male youth are considerably more likely than female youth to be victims of violent crimes. In 1997, 33.1 per thousand males ages 12 through 17 were victims of violent crimes, compared with 20.8 per thousand females (see Figure HC 2.11).

Differences by Race. The rate of violent victimization of white teens ranged from 25.5 to 40.1 per thousand between 1980 and 1997, in comparison to 30.4 to 77.0 per thousand for black youth. Black youth have consistently been more likely than white youth to be victims of violent crimes. In 1997, 30.4 black youths per thousand were victims of violent crime, compared with 27.6 per thousand among white youth ages 12 through 17.

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[45] Previous editions of this report have included simple assaults in the rates of violent victimization.

[46] The estimate of 34.1, for 1984, is not shown in Table HC 2.11 but does appear in Figure HC 2.11.

Table HC 2.11

Serious violent victimization[a] of youth ages 12 through 17 in the United States (rates per 1,000), by age, race, and gender: selected years, 1980-1997

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Age										
12-17 years	37.6	34.3	43.2	40.7	38.8	43.8	41.3	28.3	30.3	27.1
12-14 years	33.4	28.1	41.2	37.8	37.6	38.0	34.5	26.7	24.9	23.5
15-17 years	41.4	40.3	45.2	43.6	40.1	49.9	48.5	30.0	35.8	30.7
Race										
White	34.1	34.4	37.0	40.1	35.2	40.0	38.0	25.5	27.7	27.6
Black	60.2	35.2	77.0	48.0	54.3	71.5	63.0	44.5	43.4	30.4
Other	21.7	28.8	37.3	25.0	48.7	17.6	27.5	23.7	31.2	9.7
Gender										
Male	54.8	49.8	60.5	60.7	49.8	53.9	51.5	39.0	40.4	33.1
Female	19.7	18.2	24.9	19.6	27.2	33.1	30.6	17.0	19.7	20.8

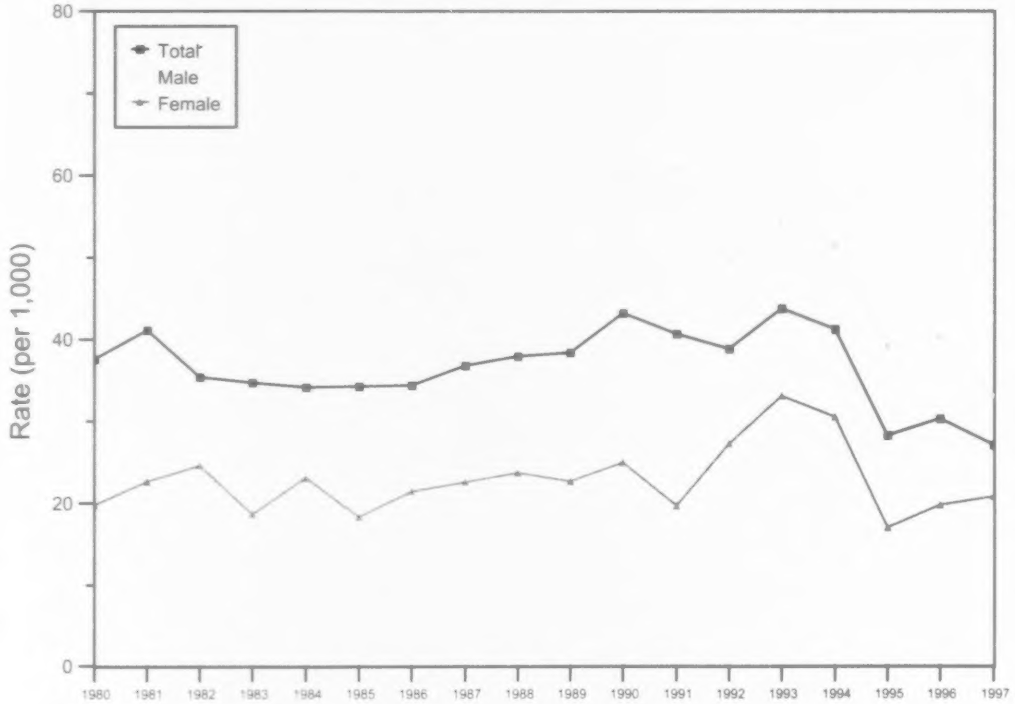
[a] Serious violent victimization is defined as being a victim of a violent crime, including aggravated assaults, rape, and robbery (stealing by force or threat of violence).

Notes: Because of changes made in the victimization survey, data prior to 1992 are adjusted to make them comparable with data collected under the redesigned methodology. Victimization rates were calculated using population estimates from the U.S. Bureau of the Census, *Current Population Reports*. Such population estimates normally differ somewhat from population estimates derived from survey data. The rates may therefore differ marginally from rates based upon survey-derived population estimates.

Source: U.S. Bureau of Justice Statistics, National Crime Victimization Survey, 1980-1997 (as published in *America's Children: Key National Indicators of Well-Being, 1999*, Federal Interagency Forum on Child and Family Statistics, Table BEH4.A, available online at http://childstats.gov/ac1999).

Figure HC 2.11

Serious violent victimization[a] of youth ages 12 through 17 in the United States (rates per 1,000), by gender: 1980-1997



[a] Serious violent victimization is defined as being a victim of a violent crime, including aggravated assaults, rape, and robbery (stealing by force or threat of violence).

Notes: Because of changes made in the victimization survey, data prior to 1992 are adjusted to make them comparable with data collected under the redesigned methodology. Victimization rates were calculated using population estimates from the U.S. Bureau of the Census, *Current Population Reports*. Such population estimates normally differ somewhat from population estimates derived from survey data. The rates may therefore differ marginally from rates based upon survey-derived population estimates.

Source: U.S. Bureau of Justice Statistics, National Crime Victimization Survey, 1980-1997 (as published in *America's Children: Key National Indicators of Well-Being, 1999*, Federal Interagency Forum on Child and Family Statistics, Table BEH4.A, and unpublished tables).

HC 2.12

DENTAL CARIES

"Dental caries" refers to decay in one or more teeth. Proper preventive care reduces the incidence of dental caries. The presence of dental caries may indicate a lack of access to preventive care or a lack of information about preventive techniques.[47] Additionally, children who do not receive restorative treatment for existing dental caries may experience much pain and suffering and may frequently miss school, and the functioning of their teeth may be permanently harmed.[48]

Differences by Race/Ethnicity.[49] Mexican American children ages 2 through 5 had the highest prevalence of dental caries in their primary teeth (see Figure HC 2.12). During the period from 1988 to 1994, one-third of Mexican American children had dental caries, compared with 24.2 percent of non-Hispanic black children and 13.6 percent of non-Hispanic white children. Mexican American and non-Hispanic black children ages 6 through 14 were about twice as likely as non-Hispanic white children to have dental caries in their permanent teeth (see Figure HC 2.12).

Differences by Poverty Status. The prevalence of dental caries is disproportionately concentrated among children from low-income families.[50] Among children ages 2 to 5, 29.7 percent of poor children had caries in their primary teeth, compared to 14.4 percent of non-poor children. Among older children, 19.5 percent of poor children had caries in their permanent teeth, while 8.6 of non-poor children did (see Table HC 1.12). Additionally, poor children, who are less likely than other children to receive dental services, are at a higher risk of suffering from untreated dental caries.[51]

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[47] Kaste, L.M., Selwitz, R.H., Oldakowski, R.J., Brunelle, J.A., Winn, D.M., and Brown, L.J. 1996. "Coronal Caries in the Primary and Permanent Dentition of Children and Adolescents 1-17 Years of Age: United States 1988-1991." *Journal of Dental Research* 75 (Spec Iss): 631-641. Rockville, Md.: National Institutes of Health. National Institute of Dental Research, Division of Epidemiology and Oral Disease Prevention.

[48] Lewit, E.M., and Kerrebrock, N. 1998. "Child Indicators: Dental Health." *The Future of Children* 8 (1): 133-142.

[49] Estimates for whites and blacks exclude Hispanics of those races.

[50] Vargas, C.M., Crall, J.J., and Schneider, D.A. 1998. "Sociodemographic Distribution of Pediatric Dental Caries: NHANES III, 1988-1994." *Journal of the American Dental Association* 129: 1229-1238 (Tables 2 and 5).

[51] Lewit, E.M., and Kerrebrock, N. 1998. "Child Indicators: Dental Health." *The Future of Children* 8 (1):133-142.

Table HC 2.12

Percentage of children ages 2 through 14 in the United States with untreated dental caries, by age, race/ethnicity, and poverty status:[a] 1988-1994

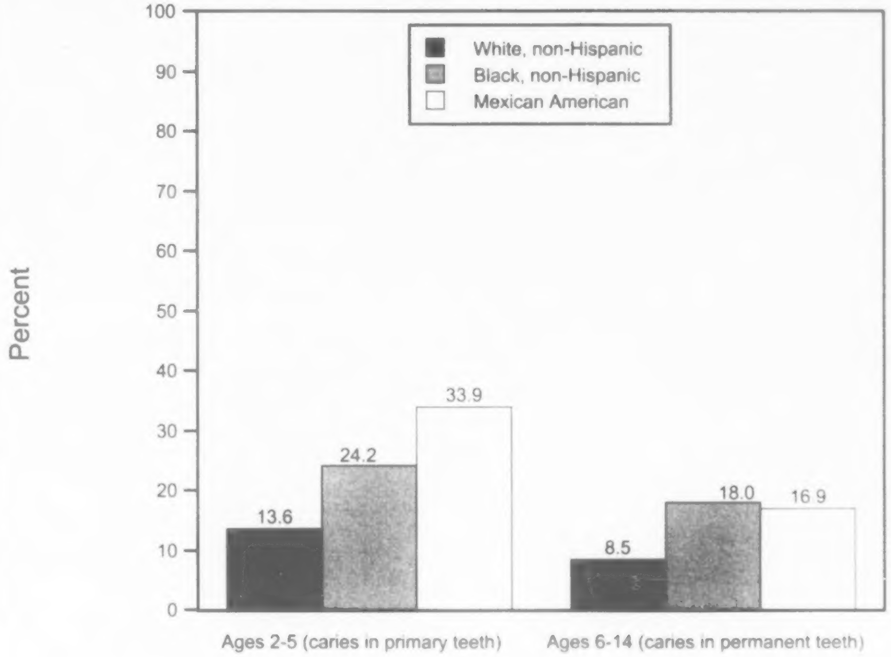
	Total	Above poverty level	At or below poverty level
Ages 2-5 (caries in primary teeth)			
All children	18.7	14.4	29.7
White, non-Hispanic	13.6	11.3	25.6
Black, non-Hispanic	24.2	21.8	26.4
Mexican American	33.9	30.2	37.7
Ages 6-14 (caries in permanent teeth)			
All children	11.3	8.6	19.5
White, non-Hispanic	8.5	7.2	15.8
Black, non-Hispanic	18.0	16.7	19.8
Mexican American	16.9	12.0	22.2

[a] Estimates for whites and blacks exclude Hispanics of those races.

Sources: Unpublished estimates from the Third National Health and Nutrition Examination Survey (conducted between 1988 and 1994) calculated by the Division of Epidemiology, Office of Analysis, Epidemiology and Health Promotion, National Center for Health Statistics, Centers for Disease Control. Vargas, C.M., Crall, J.J., and Schneider, D.A. 1998. "Sociodemographic Distribution of Pediatric Dental Caries: NHANES III, 1988-1994." *Journal of the American Dental Association* 129: 1229-1238 (Tables 2 and 5).

Figure HC 2.12

Percentage of children ages 2 through 14 in the United States with untreated dental caries, by age and race/ethnicity:[a] 1988-1994



[a] Estimates for whites and blacks exclude Hispanics of those races.

Sources: Unpublished estimates from the Third National Health and Nutrition Examination Survey (conducted between 1988 and 1994) calculated by the Division of Epidemiology, Office of Analysis, Epidemiology and Health Promotion, National Center for Health Statistics, Centers for Disease Control. Vargas, C.M., Crall, J.J., and Schneider, D.A. 1998. "Sociodemographic Distribution of Pediatric Dental Caries: NHANES III, 1988-1994." *Journal of the American Dental Association* 129: 1229-1238 (Tables 2 and 5).

HC 2.13

CHILDREN AND ADOLESCENTS WITH HIV/AIDS

Pediatric AIDS. Through December 1998, 8,461 cases of AIDS in children younger than 13 years old have been reported in the United States. Pediatric AIDS cases represent 1.2 percent of all cumulative reported cases (688,200) to the Centers for Disease Control and Prevention. The vast majority of these cases (91 percent) result from transmission before or during birth or what is known as perinatal transmission.[52]

The estimated number of children under age 13 who acquired AIDS before or during birth increased each year during the period from 1984 through 1992. From 1992 through 1996, however, the number of reported cases of children with perinatally acquired AIDS has declined by 43 percent (see Figure HC 2.13.A). A contributing factor to this dramatic decrease was the U.S. Public Health Service's (USPHS) recommendation in August 1994 for the use of zidovudine (ZDV) therapy to reduce perinatal transmission.[53] In addition, in July 1995, the USPHS recommended universal HIV counseling and voluntary testing for all pregnant women in the United States.[54]

Differences by Race and Hispanic Origin. In 1996, the estimated number of black non-Hispanic children under age 13 with perinatally acquired AIDS was nearly five times the estimated number of cases among white, non-Hispanic children and about three times the estimated number of cases among Hispanic children (see Table HC 2.13.A). These differences are even more pronounced when rates are examined. Figure HC 2.13.B shows the AIDS rate for children under age 13 (not just perinatally acquired cases) by race and Hispanic origin in 1997.

Adolescent HIV/AIDS. The number of AIDS cases reported each year among adolescents ages 13 through 19 increased from 53 in 1986 to 180 in 1990 before declining to 153 in 1992. A change in definition increased the number of reported cases to 581 in 1993. Since then, the number has decreased to 374 in 1997 and 297 in 1998 (see Figure HC 2.13.C). Through December 1998, a total of 3,423 AIDS cases among adolescents have been reported (see Table HC 2.13.B).[55] Up to 25 percent of the new cases of HIV infection that occur in the United States each year may be among young people under age 22, and as many as 50 percent may be among young people under age 25.[56]

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[52] Centers for Disease Control and Prevention. 1998. *HIV/AIDS Surveillance Report,* 10 (2), Table 5.

[53] "Trends in Perinatal Treatment." August 11, 1999. Journal of the American Medical Association.

[54] Centers for Disease Control and Prevention. 1995. "U.S. Public Health Service Recommendations for Human Immunodeficiency Virus Counseling and Voluntary Testing for Pregnant Women". *Morbidity and Mortality Weekly Report: Recommendations and Reports* 44 (RR-7); 1-15.

[55] Centers for Disease Control and Prevention. 1998. *HIV/AIDS Surveillance Report,* 10 (2), Table 7.

[56] Rosenberg, P.S., Biggar, R.J., and Goedert, J.J. 1994. "Declining Age at HIV Infection in the United States." *New England Journal of Medicine,* 330 (11): 789-90.

Although the number of adolescents with AIDS is relatively small, substantially more young people are infected with HIV than are living with AIDS. HIV surveillance data in 25 states, collected from January 1994 through June 1997, indicate that 14 percent of individuals in whom HIV infection was the initial diagnosis were adolescents and young adults ages 13 through 24 years, compared with 3 percent in whom AIDS was the initial diagnosis.[57] Since the period between HIV infection and AIDS diagnosis can be many years, the large numbers of people who develop AIDS in their 20s likely became infected with HIV as adolescents. Through December 1998, cumulative reported cases of AIDS have reached more than 24,000 among adults ages 20 through 24 and more than 93,000 among adults ages 25 through 29.[58]

Differences by Race and Hispanic Origin. Among adolescents ages 13 through 19 with AIDS, racial and ethnic minority teens are disproportionately affected. Taken together, cases of AIDS among black and Hispanic adolescents accounted for approximately 83 percent of reported cases in 1997.[59]

Differences by Gender. The proportion of adolescents ages 13 through 19 with diagnosed cases of AIDS who are female has increased from approximately 20 percent of diagnosed cases in 1986 to half of diagnosed cases for that age group in 1997.[60]

Table HC 2.13.A

Estimated number of children under age 13 in the United States with perinatally acquired AIDS, by age and race and Hispanic origin: 1992-1996

	1992	1993	1994	1995	1996
Age[a]					
All children under age 13	901	862	792	661	516
Under age 5	733	693	613	459	360
Ages 5-12	168	169	179	202	156
Race and Hispanic origin[b]					
White, non-Hispanic	133	126	92	95	67
Black, non-Hispanic	566	531	522	415	331
Hispanic	195	195	166	146	111

[a] Age represents age at AIDS diagnosis. Totals for ages include other race and ethnic groups not specified.

[b] Persons of Hispanic origin may be of any race.

Source: Centers for Disease Control and Prevention. November 21, 1997. "Update: Perinatally Acquired HIV/AIDS—United States, 1997." *Morbidity and Mortality Weekly Report* 46 (46), Table 1.

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[57] Centers for Disease Control and Prevention. April 24, 1998. "Diagnosis and Reporting of HIV and AIDS in States with Integrated HIV and AIDS Surveillance—United States, January 1994-June 1997." *Morbidity and Mortality Weekly Report*, 47(15).

[58] Centers for Disease Control and Prevention. 1998. *HIV/AIDS Surveillance Report*, 10 (2), Table 7.

[59] Division of HIV/AIDS Prevention, National Center of HIV, STD, and TB Prevention, Centers for Disease Control and Prevention. "AIDS Surveillance in Adolescents: L265 Slide Series." Available online at http://www.cdc.gov/nchstp/hiv_aids/graphics/adolesnt.htm

[60] Division of HIV/AIDS Prevention, National Center of HIV, STD, and TB Prevention, Centers for Disease Control and Prevention. "AIDS Surveillance in Adolescents: L265 Slide Series." Available online at http://www.cdc.gov/nchstp/hiv_aids/graphics/adolesnt.htm

Table HC 2.13.B

Estimated AIDS cases in adolescents ages 13 through 19 and 20 through 24 in the United States, by gender: 1998[a]

	1998	Cumulative Total[b]
Ages 13-19		
Total	297	3,423
Male	147	2,075
Female	150	1,348
Ages 20-24		
Total	1,501	24,437
Male	907	17,797
Female	594	6,640

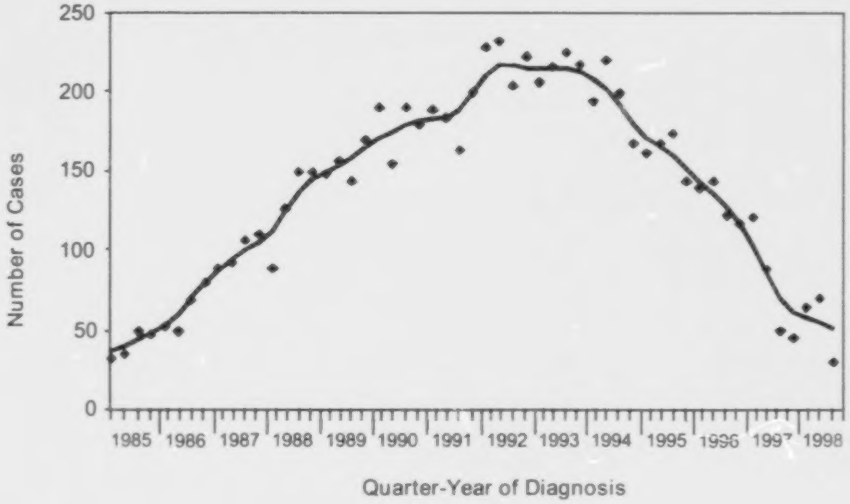
[a] These numbers do not represent actual cases of persons diagnosed with AIDS. Rather, these numbers are point estimates of persons diagnosed with AIDS, adjusted for reporting delays but not for incomplete reporting.

[b] Cumulative total is the number of cases of AIDS in the United States reported through December 1998.

Source: Centers for Disease Control and Prevention. 1998. *HIV/AIDS Surveillance Report* 10 (2), Table 13.

Figure HC 2.13.A

Reported perinatally acquired AIDS cases among children under age 13 in the United States: 1984-1998

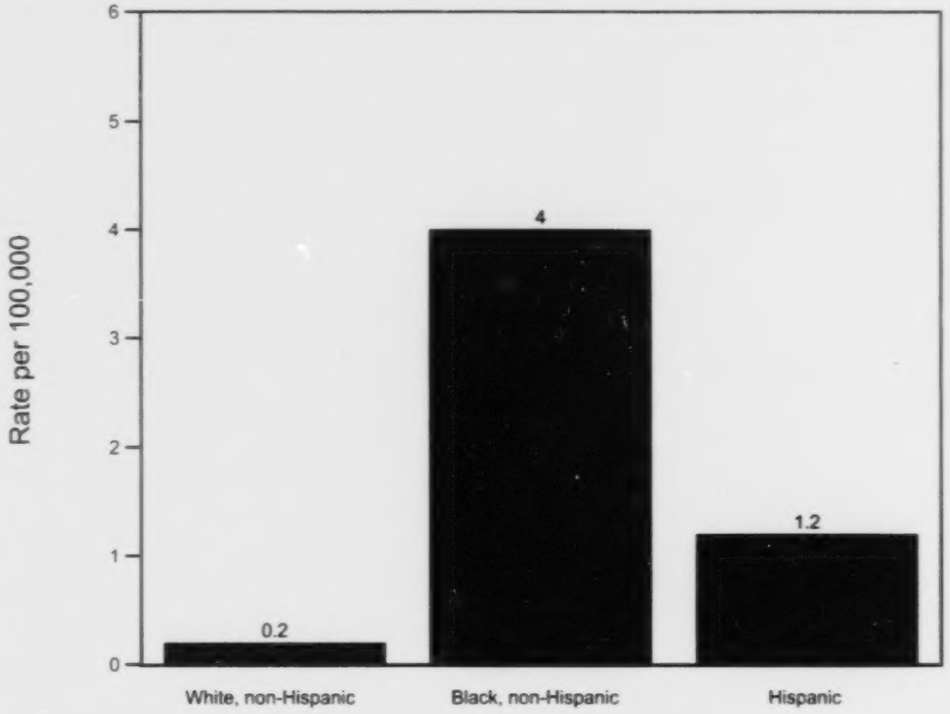


Note: Data are adjusted for reporting delays and unreported risk.

Source: Pediatric AIDS Surveillance, L262 slide series (through 1997). Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention. The slide series is available online at: http://www.cdc.gov/nchstp/hiv_aids/graphics/pediatri.htm.

Figure HC 2.13.B

Reported AIDS rate (per 100,000) among children under age 13 in the United States, by race and Hispanic origin:[a] 1997

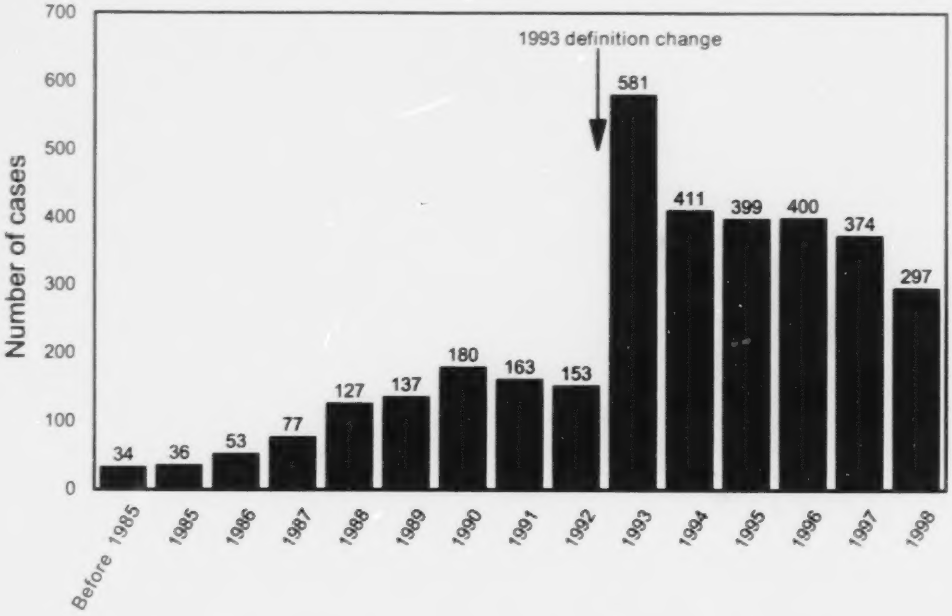


[a]Persons of Hispanic origin may be of any race.

Source: Pediatric AIDS Surveillance, L262 slide series (through 1997). Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention. The slide series is available online at: http://www.cdc.gov/nchstp/hiv_aids/graphics/pediatri.htm.

Figure HC 2.13.C

AIDS cases in adolescents ages 13 through 19 in the United States: through 1998



Source: Adolescent AIDS Surveillance, L265 slide series (through 1998). Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention. The slide series is available online at: http://www.cdc.gov/nchstp/hiv_aids/graphics/adolesnt.htm.

HC 2.14

SEXUALLY TRANSMITTED DISEASES AMONG ADOLESCENTS

Sexually Transmitted Diseases (STDs) Have Potentially Severe Consequences. Gonorrhea infections are a major cause of pelvic inflammatory disease, which in turn may lead to adverse reproductive consequences such as infertility, ectopic pregnancy, or the birth of children with physical and mental developmental disabilities. Syphilis facilitates the transmission of HIV and may be particularly important to contributing to HIV transmission in areas with high rates of both infections.[61] The increase in sexual activity among teenagers described in Section SD 4.1 has exposed a growing number of young people to the risk of sexually transmitted diseases. Despite this increased risk, the reported rate of incidence has declined among adolescents for both gonorrhea and syphilis.

Decline in Gonorrhea Rates. Gonorrhea rates have declined for all youth since 1975 (see Table HC 2.14.A). Among youth ages 15 through 19, rates decreased by more than half, from 1,275.1 cases of gonorrhea per 100,000 youth in 1975 to 530.3 cases per 100,000 youth in 1997. Gonorrhea rates also decreased among youth ages 10 through 14, but the decline started in more recent years and has not been as dramatic as among older youth. The rate for this age group was 46.7 per 100,000 in 1975, peaked at 68.9 cases in 1990, and, by 1997, had declined to 30.5 cases per 100,000.

Differences in Gonorrhea Rates by Gender. For youth ages 15 through 19 and ages 10 through 14, females have had consistently higher reported rates of gonorrhea than males (see Figure HC 2.14.A). In 1997, rates for females ages 15 through 19 were 718.0 per 100,000, versus 353.9 per 100,000 males of the same age.

Differences in Gonorrhea Rates by Race and Hispanic Origin.[62] Blacks have consistently had the highest reported rates of gonorrhea, frequently more than 10 times the rate of any other racial or ethnic group. Rates for blacks have been falling since 1990 for both age groups (for ages 15 through 19, the rate dropped from 6,316.2 in 1990 to 2,827.9 per 100,000 in 1997). By contrast, in 1997 gonorrhea rates per 100,000 for 15- through 19-year-olds of other groups were 354.6 for American Indians/Alaska Natives, 231.3 for Hispanics, 118.5 for whites, and 70.3 for Asians (see Table HC 2.14.A).

Decline in Syphilis Rates. Table HC 2.14.B shows that reported rates for primary and secondary syphilis have decreased for youth ages 10 through 14 and 15 through 19 since their peak in 1990. The rate for teens ages 15 through 19 is substantially higher than the rate for youth ages 10 through 14. The reported rate for syphilis in 1997 for ages 15 through 19 was 4.2 cases per 100,000, compared with less than one case per 100,000 for ages 10 through 14.

Higher Syphilis Rates among Females. Females from both age groups have reported more cases of syphilis than their male counterparts (see Figure HC 2.14.B). In 1997, females ages 15 through 19 had a rate of 5.8 cases per 100,000, about double the male rate of 2.6 cases per 100,000.

Differences in Syphilis Rates by Race and Hispanic Origin.[63] Black youth ages 15 through 19 have rates of syphilis more than 10 times higher than all other racial and ethnic groups throughout the period 1990 through 1997. Rates have been falling for all groups except American Indians/Alaska Natives whose reported syphilis rates have fluctuated since 1990 (see Table HC 2.14.B).

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[61] Centers for Disease Control and Prevention, Division of STD Prevention. September 1997. *Sexually Transmitted Disease Surveillance, 1996*. U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, p. 21.

[62] Estimates for whites and blacks exclude Hispanics of those races.

[63] Estimates for whites and blacks exclude Hispanics of those races.

SEE TABLE FOLLOWING PAGES

Table HC 2.14.A (Part 1)

Reported rates of youth gonorrhea[a] in the United States, by age, gender, and race and Hispanic origin (per 100,000 population): selected years, 1975-1997

	1975	1980	1985	1990	1991	1992	1993	1994[b]	1995	1996	1997
Ages 10-14											
Total	46.7	48.7	47.7	68.9	64.6	57.8	48.5	48.3	41.3	32.9	30.5
Gender											
Male	20.9	23.6	23.8	32.1	32.4	26.2	20.4	15.9	12.4	9.1	8.4
Female	73.6	74.8	72.9	107.5	98.3	91.0	78.0	82.3	71.6	57.9	53.8
Race and Hispanic origin[c,d]											
White, non-Hispanic	—	—	—	14.3	12.9	12.1	9.2	10.6	8.9	7.4	7.2
Black, non-Hispanic	—	—	—	386.8	364.7	322.4	281.6	276.4	236.7	178.8	162.2
Hispanic	—	—	—	15.3	16.5	17.7	20.5	19.0	19.3	16.0	15.2
Asian/Pacific Islander	—	—	—	4.5	9.9	6.2	4.6	6.3	5.6	3.2	3.6
American Indian/Alaska Native	—	—	—	22.7	28.9	19.1	37.2	29.5	19.0	21.5	23.8

[a] Although most areas generally adhere to the case definitions for sexually transmitted diseases (STDs) found in "Case Definitions for Public Health Surveillance" (*Morbidity and Mortality Weekly Report* 1990; 39: 1-43), there are significant differences between individual areas in case definitions as well as in the policies and systems for collecting surveillance data. In many areas, reporting from publicly supported institutions (e.g., STD clinics) was more complete than from other sources (e.g., private practitioners).

[b] For 1994, Georgia reported gonorrhea cases to CDC for only part of the year; therefore, Georgia cases and population were excluded from gonorrhea figures and tables. In past years, Georgia has been among the states reporting the highest gonorrhea rates.

[c] For the following years, the states/areas listed did not report race/ethnicity for most cases: 1990 (Baltimore, New Jersey, New York City, New York State, and Kentucky); 1991 (Baltimore, New York City, New York State, and Kentucky); 1992 (New York City and New York State); 1993 (New York City, New York State, and Georgia); 1994 (New York City, New York State, and Georgia); 1995 (Georgia, New Jersey, New York City, and New York State); and 1996 (New Jersey, New York City, and New York State); and 1997 (Idaho, New Jersey, New York City, and New York State). Massachusetts did not report age for most cases in 1990. Cases and population denominators have been excluded for these states/areas for the appropriate years.

[d] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data for 1975 from Centers for Disease Control and Prevention, Division of STD Prevention. 1996. *STD Statistics* (No. 135), Table 7; data for 1980 and 1985 from Centers for Disease Control and Prevention, Division of STD Prevention. 1987. *STD Statistics* (No. 136), Table 3; data for 1990-1992 from Division of STD/HIV Prevention. December, 1994. *Sexually Transmitted Disease Surveillance, 1993.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 9.B; data for 1993 from Division of STD Prevention. 1997. *Sexually Transmitted Disease Surveillance, 1996.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 12.B; data for 1994-1997 from Division of STD Prevention, 1998. *Sexually Transmitted Disease Surveillance, 1997.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 12B.

Table HC 2.14.A (Part 2)

Reported rates of youth gonorrhea[a] in the United States, by age, gender, and race and Hispanic origin (per 100,000 population): selected years, 1975-1997

	1975	1980	1985	1990	1991	1992	1993	1994[b]	1995	1996	1997
Ages 15-19											
Total	1,275.1	1,187.3	1,189.9	1,114.4	1,031.4	869.6	728.3	733.7	670.7	571.8	530.3
Gender											
Male	1,103.9	953.4	930.5	993.7	954.6	771.0	611.4	585.2	503.1	394.8	353.9
Female	1,446.4	1,424.6	1,455.1	1,241.6	1,112.2	973.6	851.6	890.2	847.4	758.2	718.0
Race and Hispanic origin[c,d]											
White, non-Hispanic	—	—	—	230.3	196.7	165.9	136.9	151.0	145.1	130.2	118.5
Black, non-Hispanic	—	—	—	6,316.2	5,963.9	4,973.1	4,256.2	4,235.8	3,813.9	3,065.4	2,827.9
Hispanic	—	—	—	268.7	273.1	281.0	264.0	240.3	270.1	249.4	231.3
Asian/Pacific Islander	—	—	—	70.0	91.5	76.7	81.7	84.9	81.0	67.3	70.3
American Indian/Alaska Native	—	—	—	414.6	366.0	319.0	360.4	355.0	296.2	350.5	354.6

[a] Although most areas generally adhere to the case definitions for sexually transmitted diseases (STDs) found in "Case Definitions for Public Health Surveillance" (*Morbidity and Mortality Weekly Report* 1990; 39: 1-43), there are significant differences between individual areas in case definitions as well as in the policies and systems for collecting surveillance data. In many areas, reporting from publicly supported institutions (e.g., STD clinics) was more complete than from other sources (e.g., private practitioners).

[b] For 1994, Georgia reported gonorrhea cases to CDC for only part of the year; therefore, Georgia cases and population were excluded from gonorrhea figures and tables. In past years, Georgia has been among the states reporting the highest gonorrhea rates.

[c] For the following years, the states/areas listed did not report race/ethnicity for most cases: 1990 (Baltimore, New Jersey, New York City, New York State, and Kentucky); 1991 (Baltimore, New York City, New York State, and Kentucky); 1992 (New York City and New York State); 1993 (New York City, New York State, and Georgia); 1994 (New York City, New York State, and Georgia); 1995 (Georgia, New Jersey, New York City, and New York State); and 1996 (New Jersey, New York City, and New York State); and 1997 (Idaho, New Jersey, New York City, and New York State). Massachusetts did not report age for most cases in 1990. Cases and population denominators have been excluded for these states/areas for the appropriate years.

[d] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data for 1975 from Centers for Disease Control and Prevention, Division of STD Prevention. 1996. *STD Statistics* (No. 135), Table 7; data for 1980 and 1985 from Centers for Disease Control and Prevention, Division of STD Prevention. 1987. *STD Statistics* (No. 136), Table 3; data for 1990-1992 from Division of STD/HIV Prevention. December, 1994. *Sexually Transmitted Disease Surveillance, 1993.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 9.B; data for 1993 from Division of STD Prevention. 1997. *Sexually Transmitted Disease Surveillance, 1996.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 12.B; data for 1994-1997 from Division of STD Prevention, 1998. *Sexually Transmitted Disease Surveillance, 1997.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 12B.

Table HC 2.14.B (Part 1)

Reported rates of youth primary and secondary syphillis[a] in the United States, by age, gender, and race and Hispanic origin (per 100,000 population): selected years, 1975-1997

	1975	1980	1985	1990	1991[b]	1992	1993[b]	1994	1995	1996[b]	1997[b]
Ages 10-14											
Total	1.1	0.9	0.9	1.8	1.4	1.3	0.9	0.6	0.6	0.3	0.2
Gender											
Male	0.7	0.5	0.5	0.5	0.4	0.3	0.3	0.1	0.1	0.1	0.0
Female	1.5	1.3	1.4	3.2	2.5	2.3	1.6	1.2	1.0	0.5	0.4
Race and Hispanic origin[c]											
White, non-Hispanic	—	—	—	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Black, non-Hispanic	—	—	—	10.6	8.6	8.1	5.9	3.8	3.5	1.6	1.3
Hispanic	—	—	—	1.1	0.4	0.4	0.1	0.1	0.1	0.1	0.1
Asian/Pacific Islander	—	—	—	0.2	0.3	0.0	0.2	0.0	0.0	0.0	0.0
American Indian/Alaska Native	—	—	—	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

[a] Although most areas generally adhere to the case definitions for sexually transmitted diseases (STDs) found in Case Definitions for Public Health Surveillance (*Morbidity and Mortality Weekly Report* 1990; 39: 1-43), there are significant differences between individual areas in case definitions as well as in the policies and systems for collecting surveillance data. In many areas, reporting from publicly supported institutions (e.g., STD clinics) was more complete than from other sources (e.g., private practitioners).

[b] For the indicated states/areas, cases and population denominators have been excluded for the years indicated: 1991 (Kentucky, as race/ethnicity was not reported for most cases); 1993 (Baltimore, Maryland, because age was not reported for most cases); and 1996 (Rhode Island, because race/ethnicity was not reported for most cases).

[c] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data for 1975 from Centers for Disease Control and Prevention, Division of STD Prevention. 1986. *STD Statistics* (No. 135), Table 8; data for 1980 and 1985 from Centers for Disease Control and Prevention, Division of STD Prevention. 1987. *STD Statistics* (No. 136), Table 2; data for 1990-1992 from Division of STD/HIV Prevention. December, 1994. *Sexually Transmitted Disease Surveillance, 1993.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 21.B; data for 1993 from Division of STD Prevention. *Sexually Transmitted Disease Surveillance, 1996.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, 1997, Table 24.B; data for 1994-1997 from Division of STD Prevention. 1998. *Sexually Transmitted Disease Surveillance, 1997.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 24B.

Table HC 2.14.B (Part 2)

Reported rates of youth primary and secondary syphillis[a] in the United States, by age, gender, and race and Hispanic origin (per 100,000 population): selected years, 1975-1997

	1975	1980	1985	1990	1991[b]	1992	1993[b]	1994	1995	1996[b]	1997[b]
Ages 15-19											
Total	17.8	17.2	17.0	29.8	27.8	22.5	17.0	12.7	10.1	6.4	4.2
Gender											
Male	18.0	19.2	16.3	20.9	19.1	15.5	10.8	8.3	6.6	4.3	2.6
Female	17.5	15.1	17.7	39.2	37.0	29.9	23.5	17.3	13.8	8.6	5.8
Race and Hispanic origin[c]											
White, non-Hispanic	—	—	—	2.9	2.6	2.0	1.6	1.4	1.1	0.9	0.6
Black, non-Hispanic	—	—	—	174.6	164.8	136.7	103.5	76.5	60.9	36.9	23.4
Hispanic	—	—	—	15.2	12.5	8.5	5.6	2.8	2.4	1.9	2.2
Asian/Pacific Islander	—	—	—	1.7	1.9	1.4	1.0	0.8	0.5	0.8	0.5
American Indian/ Alaska Native	—	—	—	2.8	7.0	2.7	0.6	2.4	4.2	1.2	0.6

[a] Although most areas generally adhere to the case definitions for sexually transmitted diseases (STDs) found in Case Definitions for Public Health Surveillance (*Morbidity and Mortality Weekly Report* 1990; 39: 1-43), there are significant differences between individual areas in case definitions as well as in the policies and systems for collecting surveillance data. In many areas, reporting from publicly supported institutions (e.g., STD clinics) was more complete than from other sources (e.g., private practitioners).

[b] For the indicated states/areas, cases and population denominators have been excluded for the years indicated: 1991 (Kentucky, as race/ethnicity was not reported for most cases); 1993 (Baltimore, Maryland, because age was not reported for most cases); and 1996 (Rhode Island, because race/ethnicity was not reported for most cases).

[c] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data for 1975 from Centers for Disease Control and Prevention, Division of STD Prevention. 1986. *STD Statistics* (No. 135), Table 8; data for 1980 and 1985 from Centers for Disease Control and Prevention, Division of STD Prevention. 1987. *STD Statistics* (No. 136), Table 2; data for 1990-1992 from Division of STD/HIV Prevention. December, 1994 *Sexually Transmitted Disease Surveillance, 1993.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 21.B; data for 1993 from Division of STD Prevention. *Sexually Transmitted Disease Surveillance, 1996.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, 1997, Table 24.B; data for 1994-1997 from Division of STD Prevention. 1998. *Sexually Transmitted Disease Surveillance, 1997.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 24B.

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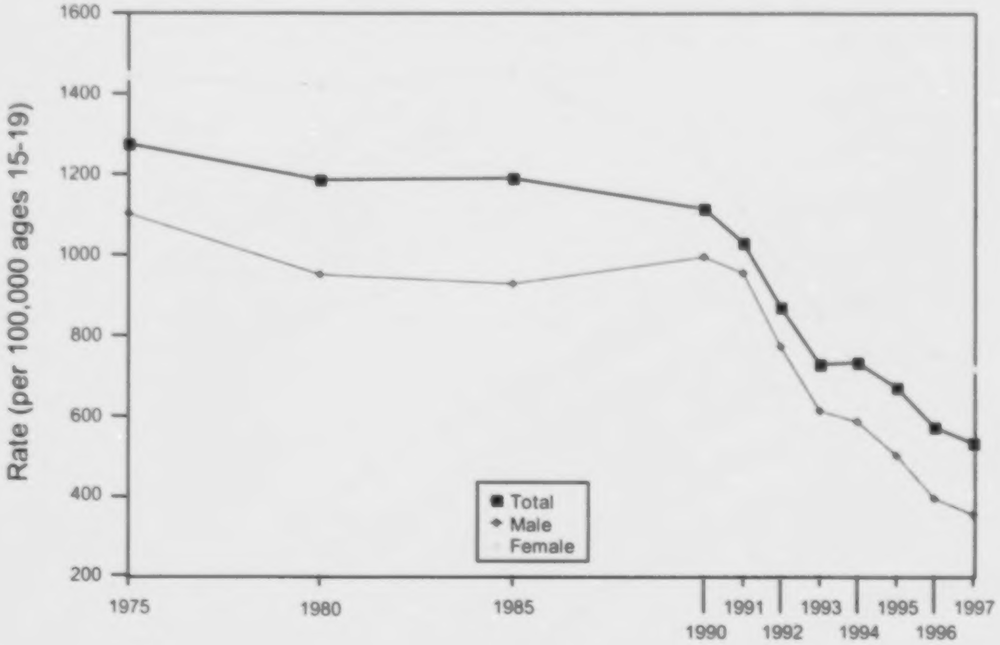
Figure HC 2.14.A

Reported rates of gonorrhea[a] for youth ages 15 through 19 in the United States, by gender (per 100,000 population ages 15 through 19): selected years, 1975-1997

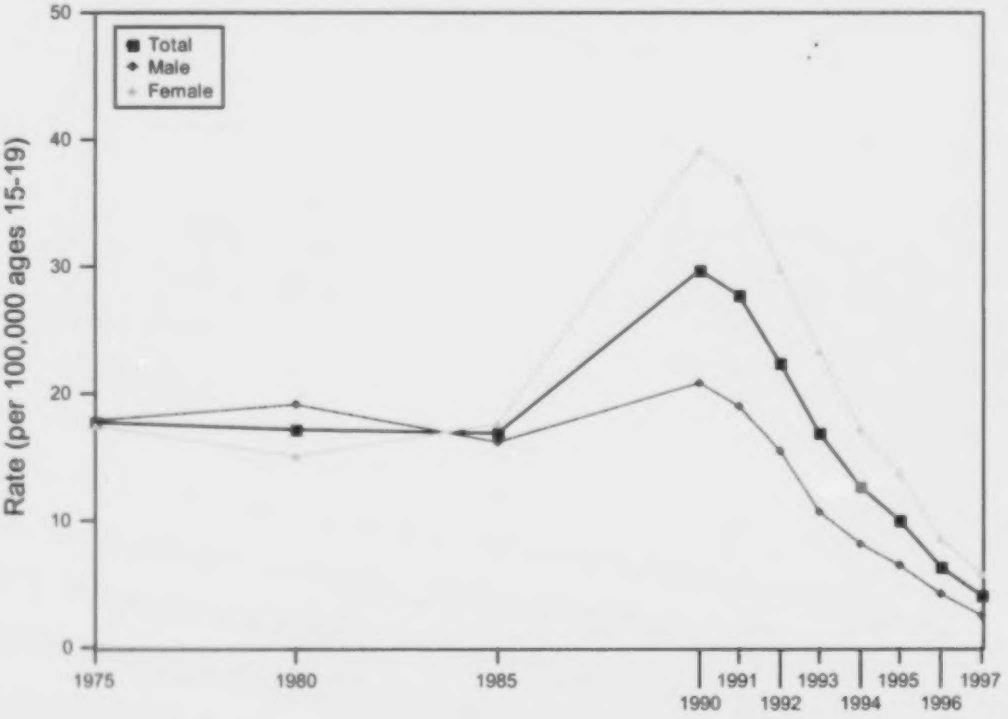


[a] Although most areas generally adhere to the case definitions for sexually transmitted diseases (STDs) found in Case Definitions for Public Health Surveillance (*Morbidity and Mortality Weekly Report* 1990; 39: 1-43), there are significant differences between individual areas in case definitions as well as in the policies and systems for collecting surveillance data. In many areas, reporting from publicly supported institutions (e.g., STD clinics) was more complete than from other sources (e.g., private practitioners).

Sources: Data for 1975 from Centers for Disease Control and Prevention, Division of STD Prevention. 1996. *STD Statistics* (No. 135), Table 7; data for 1980 and 1985 from Centers for Disease Control and Prevention, Division of STD Prevention. 1987. *STD Statistics* (No. 136), Table 3; data for 1990-1992 from Division of STD/HIV Prevention. December 1994. *Sexually Transmitted Disease Surveillance, 1993.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 9.B; data for 1993 from Division of STD Prevention. 1997. *Sexually Transmitted Disease Surveillance, 1996.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 12.B; data for 1994-1997 from Division of STD Prevention,. 1998. *Sexually Transmitted Disease Surveillance, 1997.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 12B.

Figure HC 2.14.B

Reported rates of primary and secondary syphilis[a] for youth ages 15 through 19 in the United States, by gender (per 100,000 population ages 15 through 19): selected years, 1975-1997



[a] Although most areas generally adhere to the case definitions for sexually transmitted diseases (STDs) found in Case Definitions for Public Health Surveillance (*Morbidity and Mortality Weekly Report* 1990; 39: 1-43), there are significant differences between individual areas in case definitions as well as in the policies and systems for collecting surveillance data. In many areas, reporting from publicly supported institutions (e.g., STD clinics) was more complete than from other sources (e.g., private practitioners).

Sources: Data for 1975 from Centers for Disease Control and Prevention, Division of STD Prevention. 1996. *STD Statistics* (No. 135), Table 7; data for 1980 and 1985 from Centers for Disease Control and Prevention, Division of STD Prevention. 1987. *STD Statistics* (No. 136), Table 3; data for 1990-1992 from Division of STD/HIV Prevention. December 1994. *Sexually Transmitted Disease Surveillance, 1993.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 9.B; data for 1993 from Division of STD Prevention. 1997. *Sexually Transmitted Disease Surveillance, 1996.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 12.B; data for 1994-1997 from Division of STD Prevention,. 1998. *Sexually Transmitted Disease Surveillance, 1997.* U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, Table 12B.

HC 3.1

HEALTH INSURANCE COVERAGE

Children who are covered by health insurance are considerably more likely to have a regular source of health care. Among children covered by private health insurance, 97 percent had a regular source of medical care in 1993; and of those covered by public health insurance, 94 percent had a regular source of medical care. In contrast, 79 percent of children with no health insurance had a regular source of medical care.[64] Regular care increases the continuity of care, which is important to the maintenance of good health.

Since 1987, the percentage of children who are covered by health insurance has remained stable, ranging from 85 to 87 percent (see Table HC 3.1.A). Rates of coverage vary little by age of child, though older children appear slightly less likely to be covered.

Differences by Race and Hispanic Origin.[65] Hispanic children are less likely to be covered than either white or black children. In 1997, 71 percent of Hispanic children were covered by health insurance, compared with 86 percent of white, 85 percent of Asian and Pacific Islander, and 81 percent of black children (see Table HC 3.1.A).

Differences by Poverty Status. Poor children have lower rates of health insurance coverage at 76 percent compared to 85 percent for all children in 1997 (see Tables HC 3.1.A and HC 3.1.B). They are also much less likely to be covered by private health insurance at 20 percent compared to 67 percent for all children.

Differences by Type of Health Care Coverage. Public health insurance coverage for children increased from 19 percent in 1987 to a high of 27 percent in 1993, before declining to 23 percent by 1997 (see Figure HC 3.1).[66] Younger children are considerably more likely to be covered by public health insurance. In 1997, 29 percent of children under age 6 were covered, compared with 19 percent of children ages 12 through 17 (see Table HC 3.1.A). Finally, a large proportion of black and Hispanic children rely on public health insurance for their medical coverage. In 1997, 40 percent of black and 34 percent of Hispanic children were covered by public health insurance, compared with 20 percent of white children. These percentages are down from highs of 50 and 41 percent, respectively, in 1993. The vast majority of children covered by public health insurance are covered by Medicaid (see Table 3.1.C).

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[64] Simpson G., Bloom B., Cohen R.A., and Parsons P.E. 1997. "Access to Health Care. Part 1: Children." *Vital and Health Statistics* 10 (196). National Center for Health Statistics.

[65] Estimates for whites, blacks, and Asians and Pacific Islanders include Hispanics of those races. Hispanic children may be of any race.

[66] Public health insurance for children consists primarily of Medicaid but also includes Medicare and CHAMPUS.

Table HC 3.1.A

Percentage of children under age 18 in the United States who are covered by health insurance, by type of insurance, age, and race and Hispanic origin:[a] 1987-1997

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
All health insurance											
All children	87	87	87	87	87	87	86	86	86	85	85
Under age 6	88	87	87	89	89	89	88	86	87	86	86
Ages 6-11	87	87	87	87	88	88	87	87	87	85	86
Ages 12-17	86	86	86	85	85	85	83	85	86	84	83
Race and Hispanic origin[a]											
White	88	88	88	87	88	88	87	87	87	86	86
Black	83	84	84	85	85	86	84	83	85	81	81
Hispanic	72	71	70	72	73	75	74	72	73	71	71
Asian/Pacific Islander	—	—	—	—	—	—	—	—	—	—	85
Private health insurance											
All children	74	74	74	71	70	69	67	66	66	66	67
Age											
Under age 6	72	71	71	68	66	65	63	60	60	62	63
Ages 6-11	74	74	75	73	71	71	70	67	67	67	68
Ages 12-17	75	76	76	73	72	71	69	70	71	70	70
Race and Hispanic origin[a]											
White	79	79	78	76	75	74	72	71	71	71	71
Black	49	50	52	49	45	46	46	43	44	45	48
Hispanic	48	48	48	45	43	42	42	38	38	40	42
Asian/Pacific Islander	—	—	—	—	—	—	—	—	—	—	70
Public health insurance[b]											
All children	19	19	19	22	24	25	27	26	26	25	23
Age											
Under age 6	22	23	24	28	30	33	35	33	33	31	29
Ages 6-11	19	18	18	20	22	23	25	25	26	25	23
Ages 12-17	16	16	15	18	19	19	20	20	21	19	19
Race and Hispanic origin[a]											
White	14	14	15	17	19	20	22	21	21	21	20
Black	42	42	41	45	48	49	50	48	49	45	40
Hispanic	28	27	27	32	37	38	41	38	39	35	34

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] Public health insurance for children consists primarily of Medicaid but also includes Medicare and CHAMPUS.

Sources: Housing and Household Economic Statistics Division, U.S. Bureau of the Census, analyses from the March Current Population Surveys. "Health Insurance Coverage: 1997," Table 7, available online at http://www.census.gov/hhes/hlthins/hlthin97/hi97t7.html, 11/4/98, and unpublished Table 1: Health Insurance Coverage Status—People by Age, Gender, and Race: 1997. Estimates for 1987-1996 as published in *America's Children: Key National Indicators of Well-Being, 1998.* Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table ECON5.A.

Table HC 3.1.B

Percentage of poor children under age 18 in the United States who are covered by health insurance, by type of insurance, age, and race and Hispanic origin:[a] 1997

	All health insurance	Private health insurance	Public health insurance
All poor children	76	20	62
Age			
Under age 6	80	19	—
Ages 6-11	78	21	—
Ages 12-17	69	21	—
Race and Hispanic origin[a]			
White	75	22	—
Black	79	16	—
Hispanic	70	12	—
Asian	80	26	—

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] Public health insurance for children consists primarily of Medicaid but also includes Medicare and CHAMPUS.

Source: Housing and Household Economic Statistics Division, U.S. Bureau of the Census, analyses from the March Current Population Surveys. "Health Insurance Coverage: 1997," Table 7, available online at http://www.census.gov/hhes/hlthins/hlthin97/hi97t7.html, 11/4/98, and Table 6, available online at http://www.census.gov/hhes/hlthins/hlthin97/hi97t6.html, 11/4/98.

Table HC 3.1.C

Percentage of children under age 18 in the United States who are covered by Medicaid, by age and by race and Hispanic origin:[a] 1987-1997

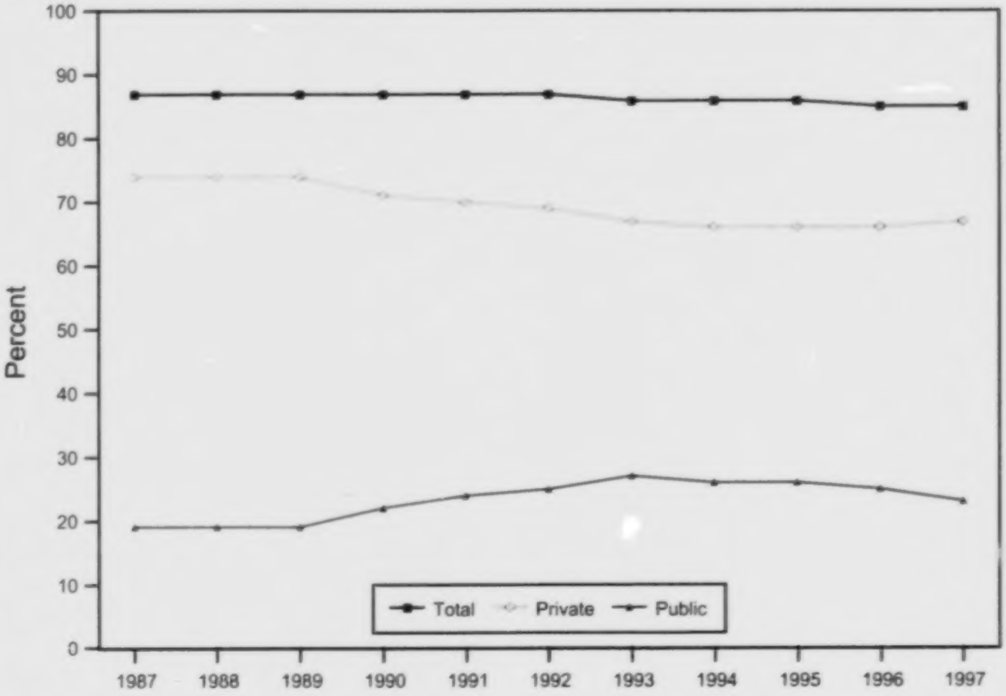
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
All children	15	16	16	19	20	22	24	23	23	22	21
Age											
Under age 6	18	19	20	24	27	30	32	30	30	28	26
Ages 6-11	15	15	15	17	19	20	22	22	23	22	20
Ages 12-17	12	12	11	14	15	15	17	16	17	16	16
Race and Hispanic origin[a]											
White	11	11	11	14	16	17	19	18	18	18	17
Black	38	38	37	42	44	46	47	44	45	41	37
Hispanic	26	25	25	30	34	37	39	37	37	34	32
Asian/Pacific Islander	—	—	—	—	—	—	—	—	—	—	18
Poor children	—	—	—	—	—	—	—	—	—	—	61
Age											
Under age 6	—	—	—	—	—	—	—	—	—	—	67
Ages 6-11	—	—	—	—	—	—	—	—	—	—	62
Ages 12-17	—	—	—	—	—	—	—	—	—	—	52
Race and Hispanic origin[a]											
White	—	—	—	—	—	—	—	—	—	—	57
Black	—	—	—	—	—	—	—	—	—	—	68
Hispanic	—	—	—	—	—	—	—	—	—	—	60
Asian/Pacific Islander	—	—	—	—	—	—	—	—	—	—	63

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: Housing and Household Economic Statistics Division, U.S. Bureau of the Census, analyses from the March Current Population Surveys. "Health Insurance Coverage: 1997," Table 7, available online at http://www.census.gov/hhes/hlthins/hlthin97/hi97t7.html, 11/4/98.

Figure HC 3.1

Percentage of children under age 18 in the United States who are covered by health insurance, by type of insurance:[a] 1987-1997



[a] Public health insurance for children consists primarily of Medicaid but also includes Medicare and CHAMPUS.

Sources: Housing and Household Economic Statistics Division, U.S. Bureau of the Census, analyses from the March Current Population Surveys. "Health Insurance Coverage: 1997," Table 7, available online at http://www.census.gov/hhes/hlthins/hlthin97/hi97t7.html, 11/4/98. Estimates for 1987-1996 as published in *America's Children: Key National Indicators of Well-Being, 1998.* Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office, Table ECON5.A.

HC 3.2

EARLY PRENATAL CARE: RECEIPT OF PRENATAL CARE IN THE FIRST TRIMESTER

Early prenatal care (i.e., care in the first trimester of a pregnancy) allows women and their health care providers to identify and, when possible, treat or correct health problems and health-compromising behaviors that can be particularly damaging during the initial stages of fetal development. Increasing the percentage of women who receive prenatal care, and who do so early in their pregnancies, can improve birth outcomes and lower health care costs by reducing the likelihood of complications during pregnancy and childbirth.[67]

The percentage of women receiving prenatal care in the first trimester has increased from 68.0 percent in 1970 to 82.5 percent in 1997(see Table HC 3.2).[68] Following a decade of essentially no change, the proportion of women receiving early prenatal care has improved incrementally throughout the 1990s.

Differences by Race and Ethnicity. The percentage of women receiving prenatal care during the first three months of pregnancy has increased over the past two decades for women of all races and those of Hispanic origin. While the gains have been greatest for black, American Indian/Alaska Native, and Hispanic women, white women and Asian/Pacific Islander women are most likely to receive prenatal care in their first trimester (see Table HC 3.2 and Figure HC 3.2).

- American Indian/Alaska Native women have consistently had the lowest percentage of women receiving early prenatal care; however, this percentage has increased gradually, from 38.2 percent in 1970 to 68.1 percent by 1997.
- The percentage of black women receiving prenatal care in the first trimester increased from 44.2 percent in 1970 to 62.4 percent in 1980. Rates declined slightly during the 1980s but continued to increase in subsequent years, reaching 72.3 percent by1997.
- The percentage of Hispanic women who receive early prenatal care has increased from 60.2 percent in 1980 to 73.7 percent by 1997. Among Hispanics, there are important sub-group disparities. In 1997, 90.4 percent of Cuban women received early prenatal care, compared with 72.1 percent of Mexican American women.
- Since 1980, there has been a gradual increase of nearly 7 percentage points in early prenatal care receipt among Asian/Pacific Islander women—from 73.7 percent in 1980 to 82.1 percent in 1997. Chinese, Japanese, and Filipino women tend to have higher rates of prenatal care among all Asian women, compared with Hawaiian and other Asian women.
- The percentage of white women receiving early prenatal care increased from 72.3 percent to 79.2 percent between 1970 and 1980, was stable through the 1980s, then increased during the 1990s to 84.7 percent by 1997.

Differences by Age. Older women are more likely to receive early prenatal care than are younger women. Although there have been improvements in the receipt of early prenatal care by teenagers, this age group is consistently the least likely to receive prenatal care in the first trimester of pregnancy (see Table HC 3.2).

- Receipt of early prenatal care among women under age 15 improved considerably between 1975 and 1997, increasing from 30.9 percent to 47.1 percent.
- The percentage of women ages 35 and over who received early prenatal care also improved during this time period, increasing from 68.4 percent in 1975 to 87.7 percent by 1997.
- More than 80 percent of women ages 25 and older received early prenatal care throughout the 1990s.

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[67] U.S. Public Health Service. 1989. "Caring for Our Future: The Content of Prenatal Care." Washington, D.C.: U.S. Department of Health and Human Services.

[68] These data include only those women who gave birth, not all women who were pregnant.

Table HC 3.2

Percentage of women[a] in the United States receiving prenatal care in the first trimester, by race/ethnicity of mother and by age: selected years, 1970-1997

	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Total	68.0	72.4	76.3	76.2	75.8	76.2	77.7	78.9	80.2	81.3	81.9	82.5
Race/ethnicity												
White[b]	72.3	75.8	79.2	79.3	79.2	79.5	80.8	81.8	82.8	83.6	84.0	84.7
Black[b]	44.2	55.5	62.4	61.5	60.6	61.9	63.9	66.0	68.3	70.4	71.4	72.3
American Indian/ Alaska Native[b]	38.2	45.4	55.8	57.5	57.9	59.9	62.1	63.4	65.2	66.7	67.7	68.1
Asian/Pacific Islander[b]	67.3	73.3	73.7	74.1	75.1	75.3	76.6	77.6	79.7	79.9	81.2	82.1
Chinese	71.8	76.7	82.6	82.0	81.3	82.3	83.8	84.6	86.2	85.7	86.8	87.4
Japanese	78.1	82.7	86.1	84.7	87.0	87.7	88.2	87.2	89.2	89.7	89.3	89.3
Filipino	60.6	70.6	77.3	76.5	77.1	77.1	78.7	79.3	81.3	80.9	82.5	83.3
Hawaiian and part Hawaiian	—	—	—	—	65.8	68.1	69.9	70.6	77.0	75.9	78.5	78.0
Other Asian or Pacific Islander	54.9	—	67.6	69.7	71.9	71.9	72.8	74.4	76.2	77.0	78.4	79.7
Hispanic origin[c,d]	—	—	60.2	61.2	60.2	61.0	64.2	66.6	68.9	70.8	72.2	73.7
Mexican American	—	—	59.6	60.0	57.8	58.7	62.1	64.8	67.3	69.1	70.7	72.1
Puerto Rican	—	—	55.1	58.3	63.5	65.0	67.8	70.0	71.7	74.0	75.0	76.5
Cuban	—	—	82.7	82.5	84.8	85.4	86.8	88.9	90.1	89.2	89.2	90.4
Central and South American	—	—	58.8	60.6	61.5	63.4	66.8	68.7	71.2	73.2	75.0	76.9
Other and unknown Hispanic	—	—	66.4	65.8	66.4	65.6	68.0	70.0	72.1	74.3	74.6	76.0
Age												
Under age 15	—	30.9	34.5	36.0	37.9	40.3	42.9	44.8	45.7	48.1	47.4	47.1
15-19 years	—	53.3	56.3	53.9	55.1	56.6	59.5	61.9	64.3	66.3	67.1	68.1
20-24 years	—	73.4	74.9	71.7	68.9	69.5	71.2	72.8	74.6	76.0	76.6	77.3
25-29 years	—	81.5	84.0	83.1	81.7	81.9	82.9	83.6	84.5	85.2	85.6	86.1
30-34 years	—	78.9	84.4	85.5	85.3	85.4	86.4	86.9	87.7	88.2	88.6	89.1
35 years and older	—	68.4	76.1	81.3	83.4	83.8	84.6	85.3	86.2	86.7	87.1	87.7

[a] The data refer to those women who had live births.

[b] Includes persons of Hispanic origin.

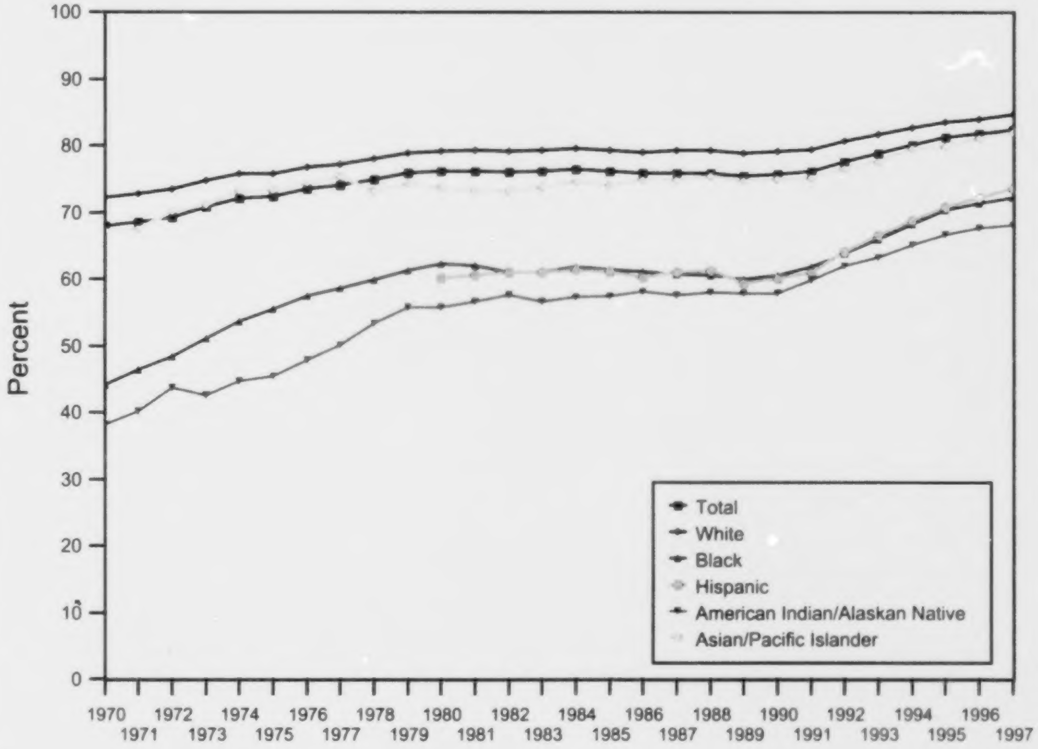
[c] Persons of Hispanic origin may be of any race.

[d] Figures for Hispanic women are based on data from 22 states that reported Hispanic origin on the birth certificate in 1980; 23 states and the District of Columbia in 1985, 48 states and the District of Columbia in 1990, 49 states and the District of Columbia in 1992, and 50 states and the District of Columbia since 1993.

Sources: Centers for Disease Control and Prevention, National Center for Health Statistics. Data computed by the Division of Health and Utilization Analysis from data compiled by the Division of Vital Statistics; National Center for Health Statistics. 1998. *Health, United States, 1998.* Hyattsville, Md., Table 6; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1996. "Report of Final Natality Statistics, 1996." *Monthly Vital Statistics Report* 46 (11). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25 and 33; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 33.

Figure HC 3.2

Percentage of women[a] in the United States receiving prenatal care in the first trimester, by race/ethnicity[b] of mother: 1970-1997



[a] The data refer to those women who had live births.

[b] Estimates for all race groups include Hispanics of those races. Persons of Hispanic origin may be of any race. Figures for Hispanic women are based on data from 22 states that reported Hispanic origin on the birth certificate in 1980, 23 states and the District of Columbia in 1985, 48 states and the District of Columbia in 1990, 49 states and the District of Columbia in 1992, and 50 states and the District of Columbia since 1993.

Sources: Centers for Disease Control and Prevention, National Center for Health Statistics. Data computed by the Division of Health and Utilization Analysis from data compiled by the Division of Vital Statistics; National Center for Health Statistics. 1998. *Health, United States, 1998.* Hyattsville, Md., Table 6; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1996. "Report of Final Natality Statistics, 1996." *Monthly Vital Statistics Report* 46 (11). Hyattsville, Md.: National Center for Health Statistics, 1997, Tables 24, 25 and 33; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47(18). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 33.

HC 3.3
LATE OR NO PRENATAL CARE

Receiving prenatal care late in a pregnancy, or receiving no prenatal care at all, can lead to negative health outcomes for mother and child. Women who receive care late in their pregnancy, or who do not receive care at all, are at increased risk of bearing infants who are of low birth weight, who are stillborn, or who die within the first year of life.[69] Between 1970 and 1997, the percentage of women receiving late or no prenatal care declined from 7.9 percent to 3.9 percent (see Figure HC 3.3).

Differences by Race and Ethnicity. The percentage of women who receive late or no prenatal care has declined substantially for women in all racial and ethnic groups (see Table HC 3.3).

- American Indian/Alaska Native women and black women have seen the most dramatic improvements, with the percentages receiving late or no prenatal care dropping by more than two-thirds for American Indian women and by more than half for black women since 1970. In 1997, 8.6 percent of American Indian/Alaska Native women received late or no prenatal care, and 7.3 percent of black women received late or no prenatal care.
- The percentage of Hispanic women receiving late or no prenatal care has decreased every year during the 1990s and at 6.2 percent in 1997 was lower than the rate for black women at 7.3.
- White women and Asian women have consistently been least likely to receive late or no prenatal care. In 1997 3.2 percent of white women received late or no prenatal care, compared to 3.8 percent of Asian women.

Differences by Age. In general, as the age of a woman increases, the likelihood of receiving late or no prenatal care decreases. The percentage of women under ages 15 who received late or no prenatal care is more than double that of women ages 15 through 19 and three to six times greater than women ages 20 and older. Although their rates remain much higher than any other age group, the percentage of women ages 15 and under who received late or no prenatal care has improved substantially since 1975, decreasing from 21.1 percent to 15.5 percent by 1996. However, data for 1997 show the trend turning upward to 16.4 percent. Percentages among women ages 15 through 19 have also improved over this time period, decreasing to 7.2 percent in 1997. Less than four percent of women in each age group 25 and over received late or no prenatal care during pregnancy in 1997. The rate of late or no prenatal care for women ages 30 through 34, reached a low of 2.5 percent (see Table HC 3.3).

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[69] U.S. Public Health Service. 1989. "Caring for Our Future: The Content of Prenatal Care." Washington, D.C.: U.S. Department of Health and Human Services.

Table HC 3.3

Percentage of women[a] in the United States receiving late or no prenatal care,[b] by race/ethnicity of mother and by age: selected years, 1970-1997

	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Total	7.9	6.0	5.1	5.7	6.1	5.8	5.2	4.8	4.4	4.2	4.0	3.9
Race/ethnicity												
White[c]	6.3	5.0	4.3	4.8	4.9	4.7	4.2	3.9	3.6	3.5	3.3	3.2
Black[c]	16.6	10.5	8.9	10.2	11.3	10.7	9.9	9.0	8.2	7.6	7.3	7.3
American Indian/ Alaska Native[c]	28.9	22.4	15.2	12.9	12.9	12.2	11.0	10.3	9.8	9.5	8.6	8.6
Asian/Pacific Islander[c]	6.8	4.6	6.5	6.5	5.8	5.7	4.9	4.6	4.1	4.3	3.9	3.8
Chinese	6.5	4.4	3.7	4.4	3.4	3.4	2.9	2.9	2.7	3.0	2.5	2.4
Japanese	4.1	2.7	2.1	3.1	2.9	2.5	2.4	2.8	1.9	2.3	2.2	2.7
Filipino	7.2	4.1	4.0	4.8	4.5	5.0	4.3	4.0	3.6	4.1	3.3	3.3
Hawaiian and part Hawaiian	—	—	—	—	8.7	7.5	7.0	6.7	4.7	5.1	5.0	5.4
Other Asian or Pacific Islander	—	—	9.0	8.1	7.1	6.8	5.9	5.4	4.8	5.0	4.6	4.4
Hispanic originc[d,e]	—	—	12.0	12.4	12.0	11.0	9.5	8.8	7.6	7.4	6.7	6.2
Mexican American	—	—	11.8	12.9	13.2	12.2	10.5	9.7	8.3	8.1	7.2	6.7
Puerto Rican	—	—	16.2	15.5	10.6	9.1	8.0	7.1	6.5	5.5	5.7	5.4
Cuban	—	—	3.9	3.7	2.8	2.4	2.1	1.8	1.6	2.1	1.6	1.5
Central and South American	—	—	13.1	12.5	10.9	9.5	7.9	7.3	6.5	6.1	5.5	5.0
Other and unknown Hispanic	—	—	9.2	9.4	8.5	8.2	7.5	7.0	6.2	6.0	5.9	5.3
Age												
Under age 15	—	21.1	20.0	20.5	20.3	18.8	17.2	16.6	15.9	15.3	15.5	16.4
15-19 years	—	10.8	10.3	12.0	11.9	10.9	9.7	8.9	8.0	7.6	7.3	7.2
20-24 years	—	5.8	5.4	6.9	8.0	7.5	6.7	6.2	5.6	5.4	5.1	5.0
25-29 years	—	3.6	3.1	3.8	4.4	4.3	3.9	3.7	3.4	3.3	3.1	3.1
30-34 years	—	4.3	3.0	3.1	3.4	3.3	3.0	2.9	2.7	2.7	2.5	2.5
35 years and older	—	7.5	5.4	4.5	4.1	3.9	3.6	3.4	3.1	3.1	2.9	2.9

[a] The data refer to those women who had live births.

[b] Late prenatal care is defined as seventh month or later.

[c] Includes persons of Hispanic origin.

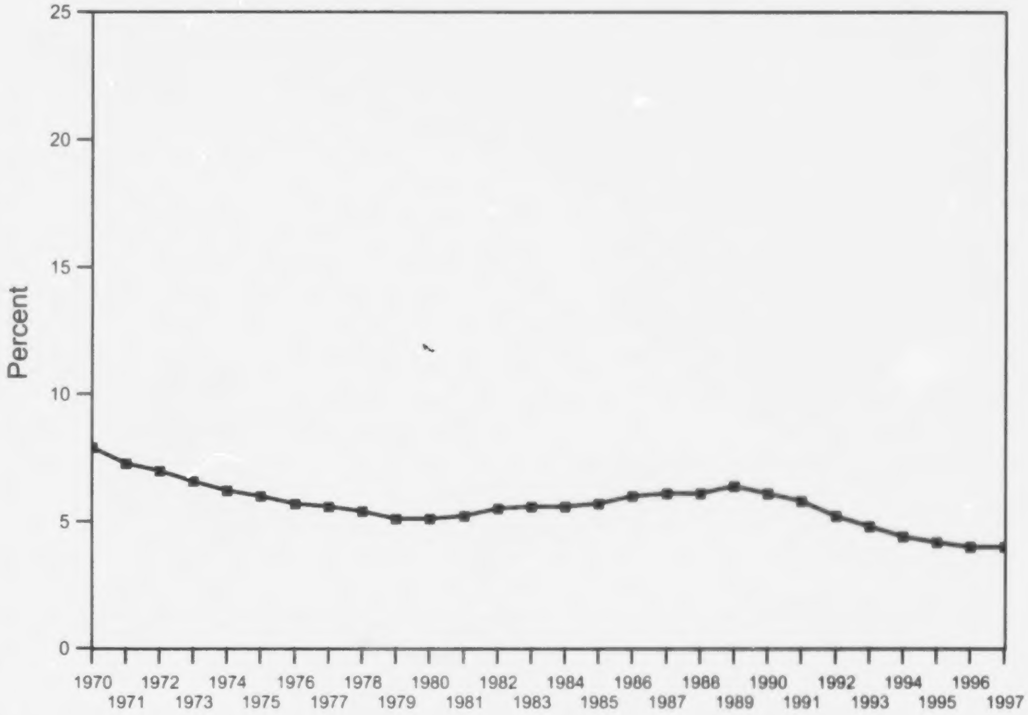
[d] Persons of Hispanic origin may be of any race.

[e] Figures for Hispanic women are based on data from 22 states that reported Hispanic origin on the birth certificate in 1980; 23 states and the District of Columbia in 1985, 48 states and the District of Columbia in 1990, 49 states and the District of Columbia in 1992, and 50 states and the District of Columbia since 1993.

Sources: Centers for Disease Control and Prevention, National Center for Health Statistics. Data computed by the Division of Health and Utilization Analysis from data compiled by the Division of Vital Statistics; National Center for Health Statistics. 1998. *Health, United States, 1998.* Hyattsville, Md., Table 6; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1996. "Report of Final Natality Statistics, 1996." *Monthly Vital Statistics Report* 46 (11). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 33; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 33.

Figure HC 3.3

Percentage of women[a] in the United States receiving late or no prenatal care:[b] 1970-1997



[a] The data refer to those women who had live births.

[b] Late prenatal care is defined as seventh month or later.

Sources: Centers for Disease Control and Prevention, National Center for Health Statistics. Data computed by the Division of Health and Utilization Analysis from data compiled by the Division of Vital Statistics; National Center for Health Statistics. 1998. *Health, United States, 1998.* Hyattsville, Md., Table 6; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1996. "Report of Final Natality Statistics, 1996." *Monthly Vital Statistics Report* 46 (11). Hyattsville, Md.: National Center for Health Statistics, 1997, Tables 24, 25 and 33; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 24, 25, and 33.

HC 3.4

INADEQUATE PRENATAL CARE

Receiving early and consistent prenatal care increases the likelihood of a healthy birth outcome. Adequate prenatal care is determined by both the early receipt of prenatal care (within the first trimester) and the receipt of an appropriate number of prenatal care visits for each stage of a pregnancy.[70] Women whose prenatal care fails to meet these standards are at a greater risk for pregnancy complications and negative birth outcomes.

Differences by Race. While the percentages of both black and white women receiving inadequate prenatal care have declined since 1990, the percentage of black women receiving inadequate care has consistently been more than twice as high as the percentage of white women. This gap has existed since at least 1984 (see Table HC 3.4). For example, in 1997, 10.4 percent of black women received inadequate prenatal care, compared with 4.5 percent of white women.

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[70] The Kessner Index provides a measure for the adequacy of prenatal care by assessing the timeliness and frequency with which prenatal care is received according to the gestational age of the baby. Using the Kessner Index standards, prenatal care is determined to be adequate, intermediate, or inadequate. Adequate prenatal care must begin within the first trimester of pregnancy and follow a prescribed number of minimum prenatal visits by gestational period. Inadequate care encompasses all women who started care after the sixth month of pregnancy (third trimester) and all women who had a low frequency of prenatal visits that followed the pattern described in the following chart:

Gestation (Weeks)		Number of Prenatal Visits
17-21	and	0
22-29	and	1 or 0
30-31	and	2 or fewer
32-33	and	3 or fewer
34 or More	and	4 or fewer

Table HC 3.4

Percentage of women in the United States[a] receiving inadequate prenatal care (based on the Kessner Index),[b] by race:[c] selected years, 1984-1997

	1984	1986	1988	1990	1991	1992	1993	1994	1995	1996	1997
Race[c]											
White	6.2	6.3	6.1	6.8	6.4	5.7	5.3	4.9	4.7	4.6	4.5
Black	15.1	15.3	15.5	16.4	15.5	14.5	13.1	12.0	11.0	10.6	10.4

[a] Based on 49 states for 1984-1988 and all 50 states for 1989-1997.

[b] The Kessner Index provides a measure for the adequacy of prenatal care by assessing the timeliness and frequency with which prenatal care is received according to the gestational age of the baby. Using the Kessner Index standards, prenatal care is determined to be adequate, intermediate, or inadequate. Adequate prenatal care must begin within the first trimester of pregnancy and follow a prescribed number of minimum prenatal visits by gestational period. Inadequate care encompasses all women who started care after the sixth month of pregnancy (third trimester) and all women who had a low frequency of prenatal visits that followed the pattern described in the following chart:

Gestation (Weeks)		Number of Prenatal Visits
17-21	and	0
22-29	and	1 or 0
30-31	and	2 or fewer
32-33	and	3 or fewer
34 or More	and	4 or fewer

[c] For 1990, 1991, 1992, 1993, 1994, 1995, 1996 and 1997, race is of mother; for 1984, 1986, and 1988, race is of child.

Note: Births with period of gestation, number of prenatal visits, or month prenatal care began not stated were excluded from tabulation.

Source: Unpublished tabulations, Division of Vital Statistics, National Center for Health Statistics.

HC 3.5

IMMUNIZATION: PERCENTAGE OF CHILDREN AGES 19 MONTHS TO 35 MONTHS WHO ARE FULLY IMMUNIZED

Childhood vaccinations can prevent diseases that killed or permanently impaired many children in past decades. The Centers for Disease Control and Prevention recommends that 80 percent of all routine childhood vaccinations be administered within the first two years of life. Vaccination coverage is particularly important before children enter preschool to prevent the spread of disease. Today, at least 95 percent of children are adequately vaccinated by the time they enter kindergarten.[71]

There were substantial increases in the proportion of children vaccinated between 1991 and 1994 for each of the recommended vaccines (data not shown).[72] Coverage has continued to increase during the period from 1994 to 1997. For example, the percentage of preschool children receiving the combined series 4:3:1:3 vaccine was 69 percent in 1994 and reached 76 percent by 1997.[73] Even with the increases of recent years, more than one million preschool children remain unvaccinated for serious preventable diseases.[74] In particular, there are differences in immunization rates by poverty status and race and Hispanic origin.

Differences by Race and Hispanic Origin.[75] Non-Hispanic white infants ages 19 months to 35 months have higher percentages of vaccination receipt than do non-Hispanic black children or children of Hispanic origin. This disparity in vaccination levels has narrowed somewhat from 1994 to 1997, as the vaccination levels of black and Hispanic children have improved. By preschool, the vaccination levels of children across racial and ethnic groups are nearly the same, narrowing a gap that once was as wide as 26 percentage points for specific vaccinations.[76] Differences in vaccination rates among racial and ethnic groups are partly accounted for by poverty level.[77]

Differences by Poverty Status. Although vaccination levels have increased substantially between 1995 and 1997 among children in households at or above the poverty level, poor children are still less likely to have received recommended vaccinations .[78] In 1997, 79 percent of children in families at or above the poverty level received the combined series (4:3:1:3), compared with 71 percent of poor children (see Table HC 3.5).

[71] Office of Communication, Division of Media Relations, Centers for Disease Control and Prevention. 1997. Facts about the Childhood Immunization Initiative.

[72] Based on data from the National Immunization Program, Center for Prevention Services, from data compiled by the Division of Health Interview Statistics as reported in National Center for Health Statistics. 1997. *Health, United States, 1996-97.* Hyattsville, Md.

[73] The combined series 4:3:1:3 consists of four doses of diphtheria-tetanus-pertussis (DTP) vaccine, three doses of polio vaccine, one dose of measles-containing vaccine, and three doses of Haemophilus influenzae type b (HiB) vaccine.

[74] Office of Communication, Division of Media Relations, Centers for Disease Control and Prevention. 1997. Facts about the Childhood Immunization Initiative.

[75] Estimates for whites and blacks exclude Hispanics of those races.

[76] "Vaccination Levels for Minority Children in the U.S. at All-Time High." U.S. Department of Health and Human Services Press Release. October 16, 1997.

[77] Centers for Disease Control and Prevention. November 13, 1998. "Vaccination Coverage by Race/Ethnicity and Poverty Level among Children Aged 19-35 Months—United States, 1997." *Morbidity and Mortality Weekly Report* 47 (44).

[78] Centers for Disease Control and Prevention. November 13, 1998. "Vaccination Coverage by Race/Ethnicity and Poverty Level among Children Aged 19-35 Months—United States, 1997." *Morbidity and Mortality Weekly Report* 47 (44).

SEE TABLE FOLLOWING PAGES

Table HC 3.5 (Part 1)

Percentage of children[a] ages 19 months to 35 months in the United States who have received routinely recommended vaccinations, by poverty status[b] and race and Hispanic origin:[c] 1994[d]-1997

	All races			White, non-Hispanic		
Vaccination type	Total	Below poverty	At or above poverty	Total	Below poverty	At or above poverty
Combined series (4:3:1:3)[e]						
1994	69	61	72	72	—	—
1995	74	67	77	77	68	79
1996	77	69	80	79	68	81
1997	76	71	79	79	72	80
Combined series (4:3:1)[f]						
1994	75	66	78	78	—	—
1995	76	68	79	79	—	—
1996	78	71	81	80	70	82
1997	78	73	80	80	73	82
DTP (3 doses or more)[g]						
994	93	89	96	95	—	—
1995	95	91	96	96	—	—
1996	95	92	96	96	92	97
1997	95	93	97	97	93	97
DTP (4 doses or more)[g]						
1994	76	69	79	80	—	—
1995	79	71	81	81	—	—
1996	81	73	84	83	72	85
1997	81	76	84	84	76	85
Polio (3 doses or more)						
1994	83	78	85	85	—	—
1995	88	84	89	89	—	—
1996	91	88	92	92	88	93
1997	91	90	92	92	90	92
Measles-containing[h]						
1994	89	87	90	90	—	—
1995	90	85	91	91	—	—
1996	91	87	92	92	86	93
1997	91	86	92	92	85	93
HiB (3 doses or more)[i]						
1994	86	81	88	87	—	—
1995	92	88	93	93	—	—
1996	92	88	93	93	87	94
1997	93	90	94	94	90	95
Hepatitis B (3 doses or more)[j]						
1994	37	25	41	40	—	—
1995	68	64	69	68	—	—
1996	82	78	83	82	75	83
1997	84	80	85	85	80	85

Table HC 3.5 (Part 2)

Percentage of children[a] ages 19 months to 35 months in the United States who have received routinely recommended vaccinations, by poverty status[b] and race and Hispanic origin:[c] 1994[d]-1997

Vaccination type	Black, non-Hispanic			Hispanic		
	Total	Below poverty	At or above poverty	Total	Below poverty	At or above poverty
Combined series (4:3:1:3)[e]						
1994	67	—	—	62	—	—
1995	70	66	75	69	65	72
1996	74	70	78	71	68	74
1997	73	71	77	72	70	76
Combined series (4:3:1)[f]						
1994	69	—	—	68	—	—
1995	72	—	—	71	—	—
1996	76	73	80	73	70	75
1997	74	72	78	74	72	77
DTP (3 doses or more)[g]						
1994	91	—	—	90	—	—
1995	92	—	—	93	—	—
1996	93	91	95	93	92	94
1997	95	95	96	93	92	94
DTP (4 doses or more)[g]						
1994	72	—	—	70	—	—
1995	74	—	—	75	—	—
1996	79	75	82	77	73	79
1997	78	76	80	77	75	80
Polio (3 doses or more)						
1994	79	—	—	81	—	—
1995	84	—	—	87	—	—
1996	90	88	92	89	88	90
1997	90	90	91	90	89	90
Measles-containing[h]						
1994	86	—	—	88	—	—
1995	86	—	—	88	—	—
1996	89	88	91	88	88	89
1997	90	88	92	88	86	89
HiB (3 doses or more)[i]						
1994	85	—	—	84	—	—
1995	89	—	—	90	—	—
1996	90	87	92	89	88	90
1997	92	92	94	90	89	92
Hepatitis B (3 doses or more)[j]						
1994	29	—	—	33	—	—
1995	65	—	—	69	—	—
1996	82	79	86	80	79	82
1997	83	82	84	81	79	84

Table HC 3.5 (Part 3)

Percentage of children[a] ages 19 months to 35 months in the United States who have received routinely recommended vaccinations, by poverty status[b] and race and Hispanic origin:[c] 1994[d]-1997

Note: Some numbers in this table may differ from those published in previous editions of this report. Revised estimates of data from the National Immunization Survey, published in *Health, United States, 1998* (see source statement), include an adjustment for children with missing immunization provider data.

[a] Data are based on telephone interviews of a sample of the civilian, noninstitutionalized population, with households selected via a random digit dial (RDD) procedure. Refusals and unknowns were excluded. Exclusions included unknown vaccine type.

[b] Poverty status is based on family income and family size using U.S. Bureau of the Census poverty thresholds.

[c] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

[d] Estimates are based on interviews conducted from April 1994 through December 1994.

[e] The combined series 4:3:1:3 consists of four doses of diphtheria-tetanus-pertussis (DTP) vaccine, three doses of polio vaccine, one dose of a measles-containing vaccine, and three doses of Haemophilus influenzae type b (HiB) vaccine.

[f] The combined series 4:3:1 consists of four doses of DTP vaccine, three doses of polio vaccine, and one dose of a measles-containing vaccine.

[g] Diphtheria-tetanus-pertussis vaccine.

[h] Any vaccination containing measles vaccine.

[i] Haemophilus influenzae type b vaccine.

[j] The percentage of children 19-35 months of age who received three or more doses of hepatitis B vaccine was artificially low in 1994 because universal infant vaccination with a three-dose series was not recommended until November 1991.

Sources: Unpublished data from the National Immunization Survey, National Center for Health Statistics and National Immunization Program, Centers for Disease Control and Prevention; Centers for Disease Control and Prevention. July 10, 1998. "National, State, and Urban Area Vaccination Coverage Levels among Children Aged 19-35 Months—United States, 1997." *Morbidity and Mortality Weekly Report* 47 (26), Table 1; Centers for Disease Control and Prevention. November 13, 1998. "Vaccination Coverage by Race/Ethnicity and Poverty Level among Children Aged 19-35 Months—United States, 1997." *Morbidity and Mortality Weekly Report* 47 (44), Table 1 and text; National Center for Health Statistics. *Health, United States, 1996-97.* Hyattsville, Md.: 1997, Table 55; Centers for Disease Control and Prevention. October 17, 1997. "Vaccination Coverage by Race/Ethnicity and Poverty Level among Children Aged 19-35 Months—United States, 1996." *Morbidity and Mortality Weekly Report* 46 (41), Tables 1 and 2; National Center for Health Statistics. 1998. *Health, United States, 1998 with Socioeconomic Status and Health Chartbook.* Hyattsville, Md., Table 52.

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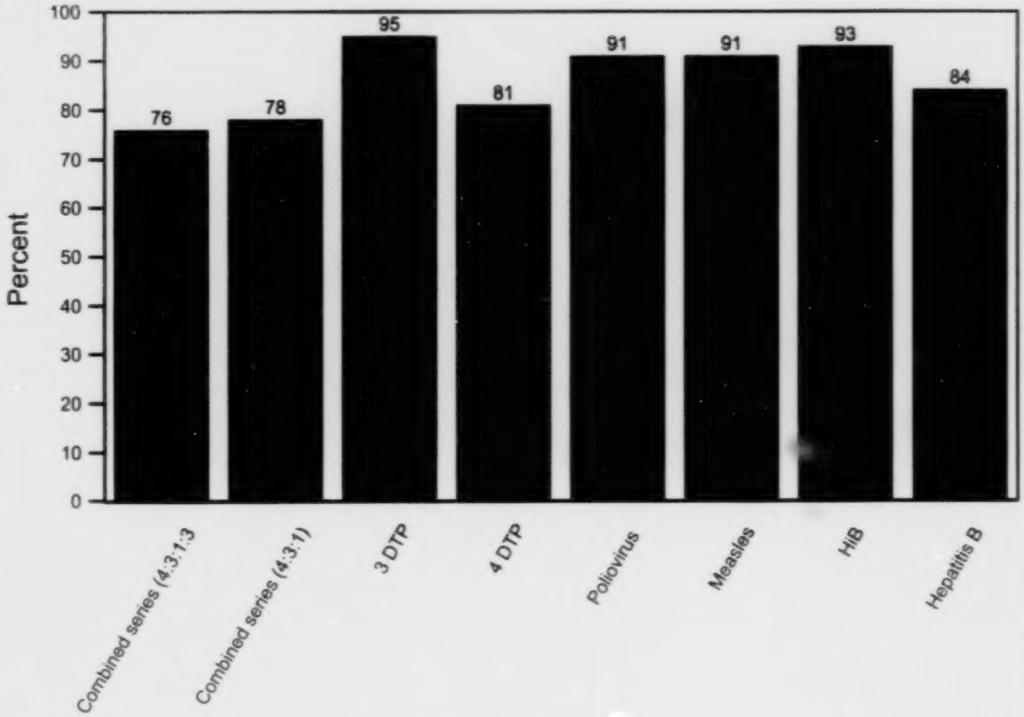
Figure HC 3.5

Percentage of children[a] ages 19 months to 35 months in the United States who have received vaccinations for routinely recommended vaccines:[b] 1997



[a] Data are based on telephone interviews of a sample of the civilian, noninstitutionalized population, with households selected via a random digit dial (RDD) procedure. Refusals and unknowns were excluded. Exclusions included unknown vaccine type.

[b] The combined series 4:3:1:3 consists of four doses of diphtheria-tetanus-pertussis (DTP) vaccine, three doses of polio vaccine, one dose of a measles-containing vaccine, and three doses of Haemophilus influenzae type b (HiB) vaccine. The combined series 4:3:1 consists of four doses of DTP vaccine, three doses of polio vaccine, and one dose of a measles-containing vaccine.

Source: Centers for Disease Control and Prevention. July 10, 1998. "National, State, and Urban Area Vaccination Coverage Levels among Children Aged 19-35 Months—United States, 1997." *Morbidity and Mortality Weekly Report* 47 (26), Table 1.

Social Development, Behavioral Health, and Teen Fertility

(SD)

SD 1.1

LIFE GOALS: THE PERCENTAGE OF HIGH SCHOOL SENIORS WHO RATED SELECTED PERSONAL AND SOCIAL GOALS AS EXTREMELY IMPORTANT

The personal and social life goals of high school students reflect their priorities for the future and provide insights into the positive and negative influences in their lives as they make the transition to adulthood. The percentages of high school seniors who rated selected personal and social life goals as extremely important for selected years between 1976 and 1997 are presented in Tables SD 1.1.A and SD 1.1.B. Personal goals include being successful in their line of work, having a good marriage and family life, and having lots of money. Social goals include making a contribution to society, working to correct social and economic inequalities, and being a leader in their community.

From 1976 through 1997, high school seniors have been fairly consistent in the relative importance they assign to various life goals. Specifically:

- Having a Good Marriage and Family Life and Being Successful in My Line of Work have been cited more often than other values by high school seniors as being extremely important. Since 1992, more than three out of four high school seniors have felt it extremely important to have a good marriage and family life, and nearly two out of three have felt it extremely important to be successful at work (see Table SD 1.1.A).
- Having Lots of Money and Making a Contribution to Society were the next most likely goals to be considered extremely important by high school seniors. Between 20 and 30 percent of seniors have found these goals extremely important in recent years (see Figures SD 1.1.A and SD 1.1.B).
- Working to Correct Social and Economic Inequalities and Being a Leader in My Community are extremely important goals in 1997 for only small percentages of high school seniors: 12 percent and 15 percent, respectively (see Figure SD 1.1.B).

Differences by Race. In 1997, black students were more likely than whites to view as extremely important goals such as being successful at work (81 percent versus 60 percent), having lots of money (45 percent versus 22 percent), and correcting social and economic inequalities (18 percent versus 9 percent). The two groups appeared equally likely to attach extreme importance to having a good marriage and family life, a rate that has hovered around 75 percent for both races over the time period examined.

Differences by Gender. Across the six goals, rates vary little between male students and female students, with several exceptions. In 1997, females were more likely to indicate that having a good marriage and family life was extremely important (81 percent versus 72 percent), and were less likely to report that having lots of money was an extremely important goal (20 percent versus 33 percent).

Table SD 1.1.A

Percentage of high school seniors in the United States who rate selected personal life goals as being "extremely important," by gender and race: selected years, 1976-1997

	1976	1981	1986	1991	1992	1993	1994	1995	1996	1997
Being successful in my line of work										
Total	53	57	61	62	66	65	63	62	65	64
Gender										
Male	53	58	62	60	63	63	61	62	62	65
Female	52	57	60	64	69	67	66	62	68	64
Race										
White	50	55	58	59	65	62	60	59	63	60
Black	67	71	73	75	80	74	79	72	74	81
Having a good marriage and family life										
Total	73	76	75	76	78	79	76	78	78	76
Gender										
Male	66	71	69	71	72	74	70	73	74	72
Female	80	82	82	83	84	85	81	83	81	81
Race										
White	72	77	76	76	79	79	76	78	78	77
Black	75	73	76	78	75	76	72	76	75	76
Having lots of money										
Total	15	18	27	28	29	26	26	25	25	28
Gender										
Male	20	24	34	37	35	32	32	30	33	33
Female	11	13	18	19	22	18	19	19	16	20
Race										
White	12	15	24	25	24	20	22	21	21	22
Black	33	32	38	39	46	45	47	41	43	45

Note: Data are based on one of six questionnaire forms, with a resulting sample size one-sixth of the total sample size for each year.

Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1976, 1981, 1986, 1991, 1992, 1993, 1994, 1995, 1996, and 1997. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Questionnaire Form 1, items A007A, A007B, and A007C.

Table SD 1.1.B

Percentage of high school seniors in the United States who rate selected social life goals as being "extremely important," by gender and race: selected years, 1976-1997

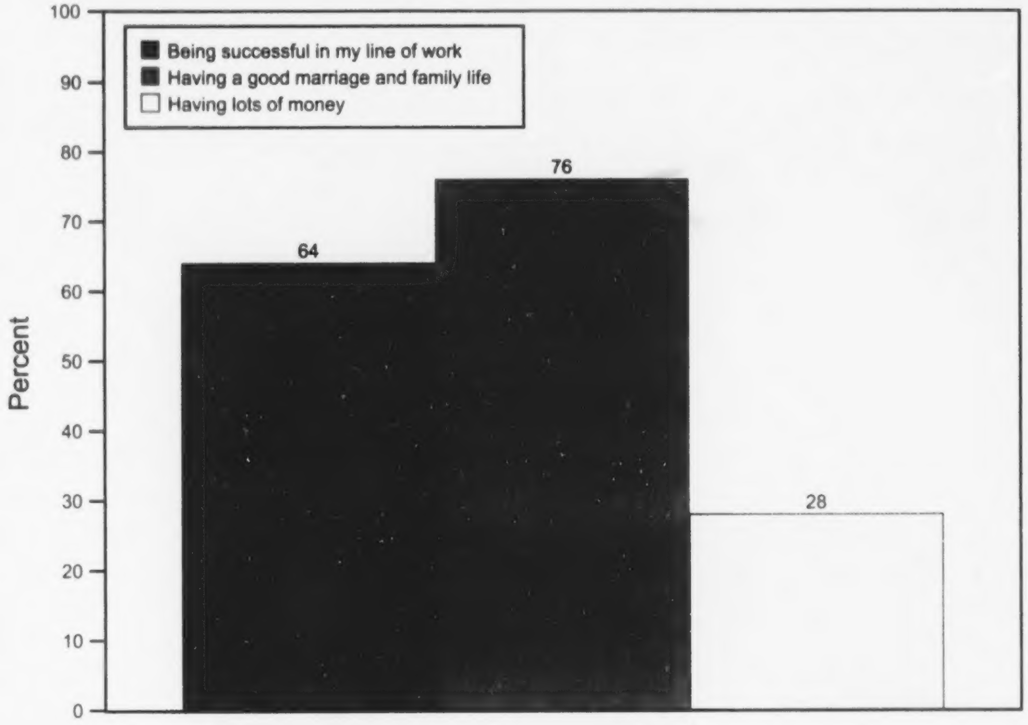
	1976	1981	1986	1991	1992	1993	1994	1995	1996	1997
Making a contribution to society										
Total	18	18	17	21	22	24	24	20	24	22
Gender										
Male	16	19	18	20	22	25	23	19	23	19
Female	20	17	16	22	23	25	25	21	26	25
Race										
White	18	18	16	20	22	24	23	19	23	22
Black	23	21	20	27	27	25	29	25	29	24
Working to correct social and economic inequalities										
Total	10	10	9	12	15	15	14	10	12	12
Gender										
Male	8	9	7	11	14	14	12	9	11	10
Female	13	10	11	13	17	16	16	10	12	12
Race										
White	8	7	7	10	13	12	11	8	9	9
Black	20	21	19	21	26	21	25	18	19	18
Being a leader in my community										
Total	7	8	9	11	13	13	14	12	15	15
Gender										
Male	8	8	11	12	14	17	14	14	16	16
Female	6	7	6	10	11	10	13	10	13	13
Race										
White	6	7	8	9	11	12	12	10	14	12
Black	14	14	12	17	21	19	21	22	23	24

Note: Data based on one of six questionnaire forms, with a resulting sample size one-sixth of the total sample size for each year.

Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1976, 1981, 1986, 1991, 1992, 1993, 1994, 1995, 1996, and 1997. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Questionnaire Form 1, items A007G, A007H, and A007L.

Figure SD 1.1.A

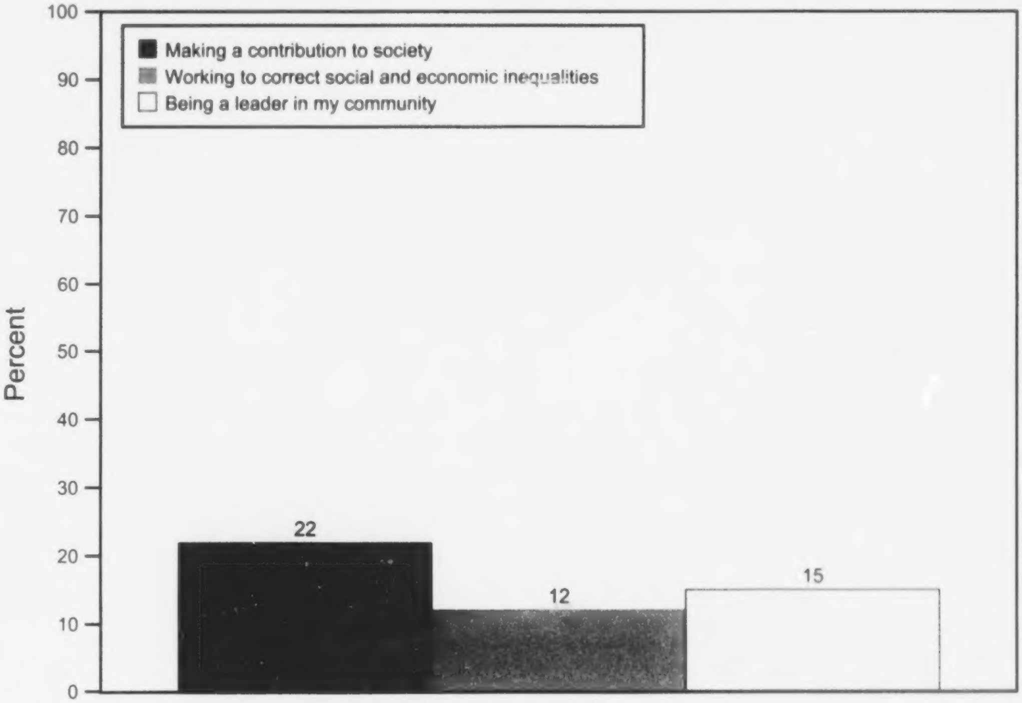
Percentage of high school seniors in the United States who rate selected personal life goals as being "extremely important": 1997



Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. 1997. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Questionnaire Form 1, items A007A, A007B, and A007C.

Figure SD 1.1.B

Percentage of high school seniors in the United States who rate selected social life goals as being "extremely important": 1997



Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. 1997. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors*. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Questionnaire Form 1, items A007G, A007H, and A007L.

SD 1.2
PEER APPROVAL

As children grow older, peer relationships come to play an increasingly important role in determining their own behaviors and attitudes.[1] For example, teenagers reporting that a large proportion of their friends are (or would like to be) sexually active are more likely to become sexually active themselves.[2]

Two measures of potential peer influence are offered here: the percentage of youth reporting that getting good grades has great or very great importance to their peers, and the percentage reporting that peers would disapprove of intentionally angering a teacher in school. Between 1980 and 1997, the percentage of 12th-graders reporting that their peers value good grades stayed fairly constant, varying between 44 percent and 50[3] percent (see Figure SD 1.2.A). During that same time period, the percentage reporting peer disapproval of angering a teacher in school decreased from 41 percent in 1980 to 34 percent in 1997 (see Table SD 1.2.B).

Differences by Age. Eighth-grade students were more likely in 1997 than either 10th- or 12th-graders to report that their peers consider good grades to be of great or very great importance (52 percent versus 43 percent and 45 percent, respectively). In that same year, on the other hand, more 12th-grade students (34 percent) than 8th- or 10th-graders (23 percent) were likely to report peer disapproval of intentionally angering a teacher in school (see Tables SD 1.2.A and SD 1.2.B).

Differences by Gender. Female students were slightly more likely than males to report that their peers value good grades and that they would disapprove of intentionally angering teachers; for example, among 12th-grade youth in 1997, 49 percent of females and 41 percent of males reported that peers hold good grades to be of great or very great importance (see Table SD 1.2.A). In that same year, 38 percent of 12th-grade females and 31 percent of 12th-grade males reported peer disapproval of intentionally angering a teacher in school (see Table SD 1.2.B).

Differences by Race. For all years for which data are presented, black students in all grades were considerably more likely than their white counterparts to report strong peer support for good grades (see Figure SD 1.2.A); for example, in 1997, 41 percent of white and 59 percent of black 12th-graders reported that their peers believed that good grades were of great or very great importance. However, the percentage of black students reporting strong peer support for good grades has dropped from 78 percent in 1980 to 59 percent in 1997. Black students are less likely to report peer disapproval of intentionally angering teachers in the 8th, 10th, and 12th grades. The difference by race is largest among high school seniors, in a trend that has been consistent since 1980 (see Figure SD 1.2.B).

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[1] Hayes, C.D. *Risking the Future*, p. 105; Newcomer, S.F., Gilbert, M. and Udry, J.R. "Perceived and Actual Same-Sex Behavior as Determinants of Adolescent Sexual Behavior." Paper presented at the Annual Meeting of the American Psychological Association, Montréal, Canada, 1980. Cited in National Commission on Children. 1991. *Beyond Rhetoric: A New American Agenda for Children and Families*, Final Report of the National Commission on Children, page 351. Washington, D.C.: U.S. Government Printing Office.

[2] Hayes, C.D. *Risking the Future*, p. 105; Cvetkovitch, G., and Grote, B. "Psychological Development and the Social Problem of Teenage Illegitimacy." In *Adolescent Pregnancy and Childbearing: Findings from Research* (C. Chilman, ed). Washington, D.C.: U.S. Department of Health and Human Services, 1980. Cited in National Commission on Children. 1991. *Beyond Rhetoric: A New American Agenda for Children and Families*, Final Report of the National Commission on Children, p. 351. Washington, D.C.: U.S. Government Printing Office.

[3] The 50 percent estimate occurred in 1982, not shown in Table SD 1.2.A.

Table SD 1.2.A

Percentage of 8th-, 10th-, and 12th-grade students in the United States reporting that good grades have great or very great importance to peers, by gender and race: selected years, 1980-1997

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
8th Grade										
Total	—	—	—	51	52	54	54	55	55	52
Gender										
Male	—	—	—	50	50	54	52	52	54	51
Female	—	—	—	53	53	54	55	56	55	53
Race										
White	—	—	—	47	47	49	49	48	48	46
Black	—	—	—	72	72	70	70	72	77	71
10th Grade										
Total	—	—	—	44	43	39	42	44	45	43
Gender										
Male	—	—	—	42	42	36	39	43	42	40
Female	—	—	—	46	44	42	45	45	47	45
Race										
White	—	—	—	38	38	35	38	39	40	38
Black	—	—	—	67	66	59	64	67	65	62
12th Grade										
Total	48	49	48	44	45	46	45	46	46	45
Gender										
Male	48	50	46	41	42	43	44	41	44	41
Female	48	48	51	47	48	48	46	50	49	49
Race										
White	43	43	43	37	39	40	39	40	42	41
Black	78	77	76	71	70	61	67	67	69	59

Note: Data for 8th- and 10th-grade students based on one of two questionnaire forms, with a resulting sample size one-half of the total sample size for each grade in each year. Data for 12th-grade students are based on one of six questionnaire forms, with a resulting sample size one-sixth of the total sample size for each year. Data for 8th and 10th grades available since 1991.

Sources: Bachman, J.G., Johnston, L.D., and O'Malley, P.M. 1980. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors*, Questionnaire Form 5, item E06D; Bachman, J.G., Johnston, L.D., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors*. 1982-1996. Questionnaire Form 3, item E06D; Bachman, J.G., Johnston, L.D., and O'Malley, P.M. 1997. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors*. Questionnaire Form 3, item E04D. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Data for 8th and 10th grades are from unpublished questionnaire responses, Form 1, item E10D, for 1991-1996 and from unpublished questionnaire responses, Forms 1 & 3, item E08D, for 1997.

Table SD 1.2.B

Percentage of 8th-, 10th-, and 12th-grade students in the United States reporting peer disapproval of intentionally angering a teacher in school, by gender and race: selected years, 1980-1997

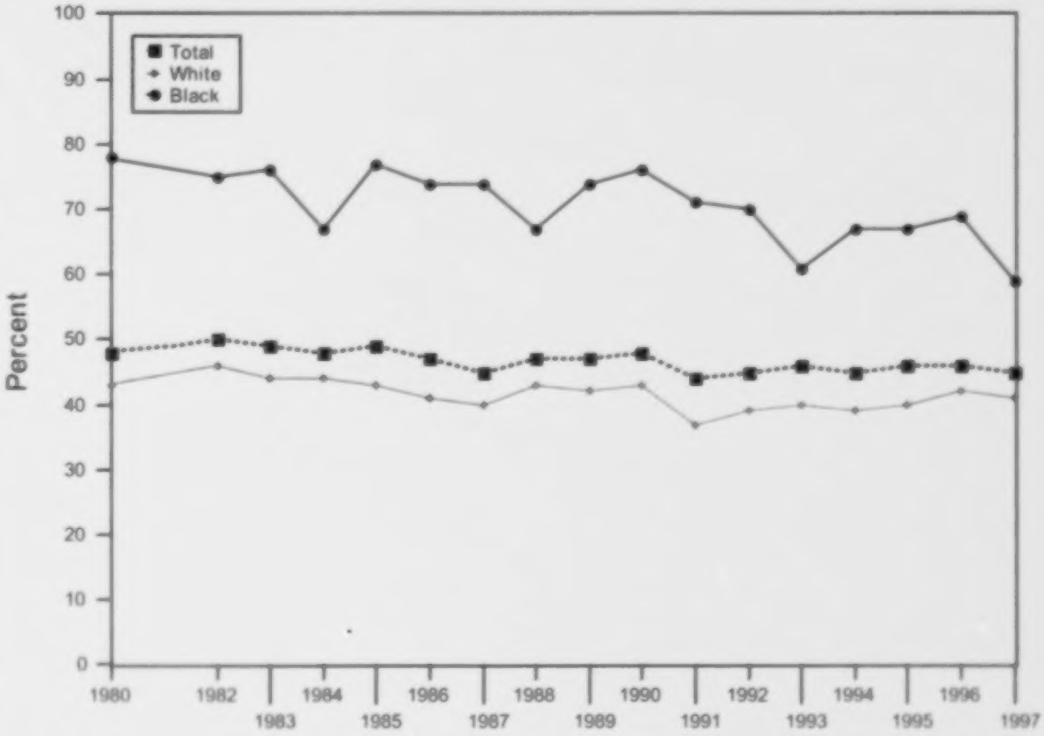
	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
8th Grade										
Total	—	—	—	26	24	24	21	22	23	23
Gender										
Male	—	—	—	22	20	20	18	19	20	21
Female	—	—	—	30	27	26	23	24	26	26
Race										
White	—	—	—	26	24	24	22	22	23	24
Black	—	—	—	23	24	23	22	22	22	20
10th Grade										
Total	—	—	—	26	24	24	26	24	23	23
Gender										
Male	—	—	—	21	19	19	22	21	19	20
Female	—	—	—	31	28	28	30	28	26	27
Race										
White	—	—	—	27	25	25	26	25	23	24
Black	—	—	—	22	21	20	23	19	20	19
12th Grade										
Total	41	42	33	33	34	34	33	36	35	34
Gender										
Male	37	35	29	31	28	30	25	32	29	31
Female	46	48	38	37	39	37	40	41	40	38
Race										
White	44	43	35	34	35	34	34	36	36	36
Black	29	33	30	29	30	27	25	33	28	30

Note: Data for 8th- and 10th-grade students based on one of two questionnaire forms, with a resulting sample size one-half of the total sample size for each grade in each year. Data for 12th-grade students based on one of six questionnaire forms, with a resulting sample size one-sixth of the total sample size for each year. Data for 8th and 10th grades available since 1991.

Sources: Bachman, J.G., Johnston, L.D., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1980-1997. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Questionnaire Form 1, item D007; data for 8th and 10th grades are from unpublished questionnaire responses, Form 1, item E08, for 1991-1996 and from unpublished questionnaire responses, Forms 1 & 3, item E06.

Figure SD 1.2.A

Percentage of high school seniors in the United States reporting that good grades have great or very great importance to peers, by race: 1980-1997[a]

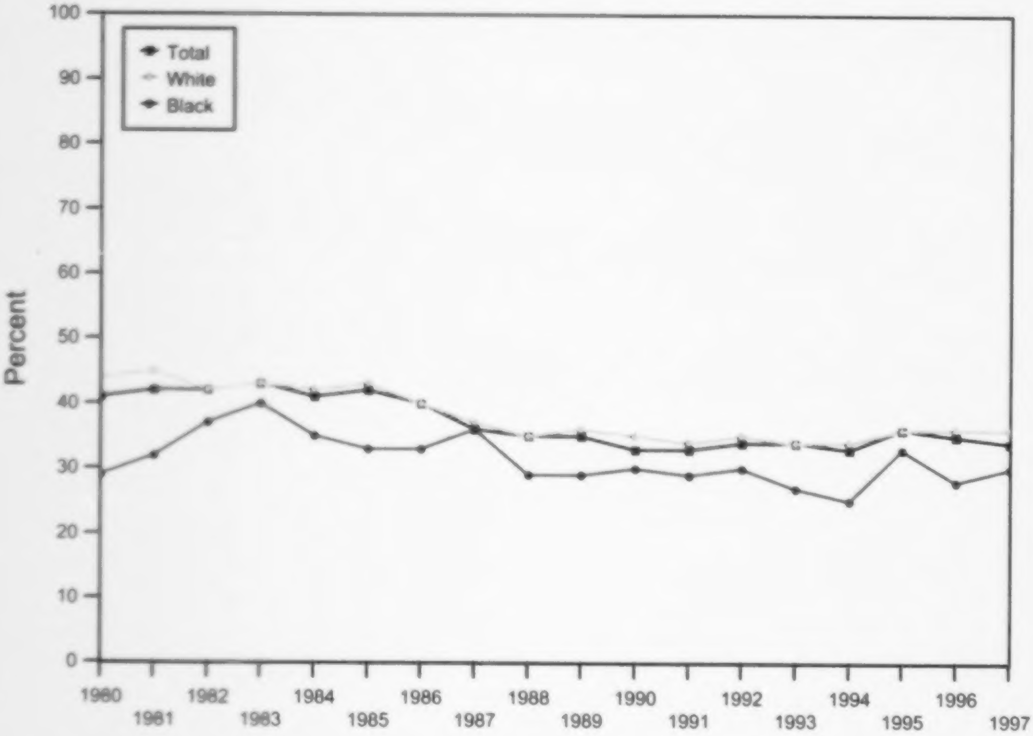


[a] This question was not asked in 1981.

Sources: Bachman, J.G., Johnston, L.D., and O'Malley, P.M. 1980. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* Questionnaire Form 5, item E06D; Bachman, J.G., Johnston, L.D., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1982-1996. Questionnaire Form 3, item E06D; Bachman, J.G., Johnston, L.D., and O'Malley, P.M. 1997. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1997. Questionnaire Form 3, item E04D. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan.

Figure SD 1.2.B

Percentage of high school seniors in the United States reporting peer disapproval of intentionally angering a teacher in school, by race: 1980-1997



Source: Bachman, J.G., Johnston, L.D., and O'Malley, P.M. 1980-1997. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Questionnaire Form 1, item D007.

SD 1.3

RELIGIOUS ATTENDANCE AND RELIGIOSITY

Research relating religion to children's day-to-day conduct suggests that teens who are religious are more likely to avoid high-risk behaviors.[4]

The number of 12th-grade students who report weekly religious attendance has declined from two out of every five students (41 percent) in 1976 to one out of every three students (31-33 percent) since 1987. During that same time period, the percentage of 12th-grade students who report that religion plays a very important role in their lives stayed fairly constant, varying between 25 percent and 32 percent (see Figure SD 1.3).

Differences by Age. Data for students in the 8th and 10th grades, available since 1991, indicate that younger adolescents are more likely to report weekly religious attendance but are not more likely to report that religion plays a very important role in their lives (see Tables SD 1.3.A and SD 1.3.B). In 1997, 44 percent of 8th-graders reported weekly religious attendance, versus 38 percent of 10th-grade and 31 percent of 12th-grade students. During that same year, the percentage reporting that religion played an important role in their lives was between 30 percent and 32 percent for all three grades.

Differences by Gender. Females in all grades are somewhat more likely than males to report weekly religious attendance and that religion plays a very important role in their lives (see Tables SD 1.3.A and SD 1.3.B).

Differences by Race. Black students across grades have consistently been nearly twice as likely as their white counterparts to report that religion plays a very important role in their lives; for example, in 1997, 55 percent of black 12th-graders reported that religion played such a role, compared with 24 percent of white 12th-grade students.

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[4] National Commission on Children. 1991. *Beyond Rhetoric: A New American Agenda for Children and Families*. Final Report of the National Commission on Children, p. 352. Washington, D.C.: U.S. Government Printing Office.

Table SD 1.3.A

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report weekly religious attendance, by gender and race: selected years, 1976-1997

	1976	1981	1986	1991	1992	1993	1994	1995	1996	1997
8th Grade										
Total	—	—	—	46	43	42	42	42	43	44
Gender										
Male	—	—	—	44	41	39	40	40	40	42
Female	—	—	—	49	46	45	45	45	46	47
Race										
White	—	—	—	48	44	44	44	43	44	46
Black	—	—	—	47	46	42	42	46	45	46
10th Grade										
Total	—	—	—	38	39	40	37	37	38	38
Gender										
Male	—	—	—	35	37	37	35	35	35	36
Female	—	—	—	42	41	43	39	40	40	41
Race										
White	—	—	—	39	39	41	37	37	38	39
Black	—	—	—	44	45	44	41	44	38	43
12th Grade										
Total	41	40	34	31	32	32	32	32	33	31
Gender										
Male	36	36	31	28	31	29	30	30	30	28
Female	46	44	38	34	34	34	35	35	35	33
Race										
White	42	41	35	31	32	31	32	32	32	29
Black	37	40	36	38	35	35	39	40	38	40

Note: Data for 8th and 10th grades available since 1991.

Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1976-1997. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. 8th and 10th grade 1991-1996 Questionnaire Forms 1 and 2, item C12B, and 8th and 10th grade 1997 Questionnaire Core Questions, item C12B. 12th grade 1976-1988 Questionnaire Forms 1-5; 12th grade 1988-1996 Questionnaire Forms 1-6, item C13B; and 12th grade 1997 Questionnaire Core Questions, item C13B.

Table SD 1.3.B

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report that religion plays a very important role in their lives, by gender and race: selected years, 1976-1997

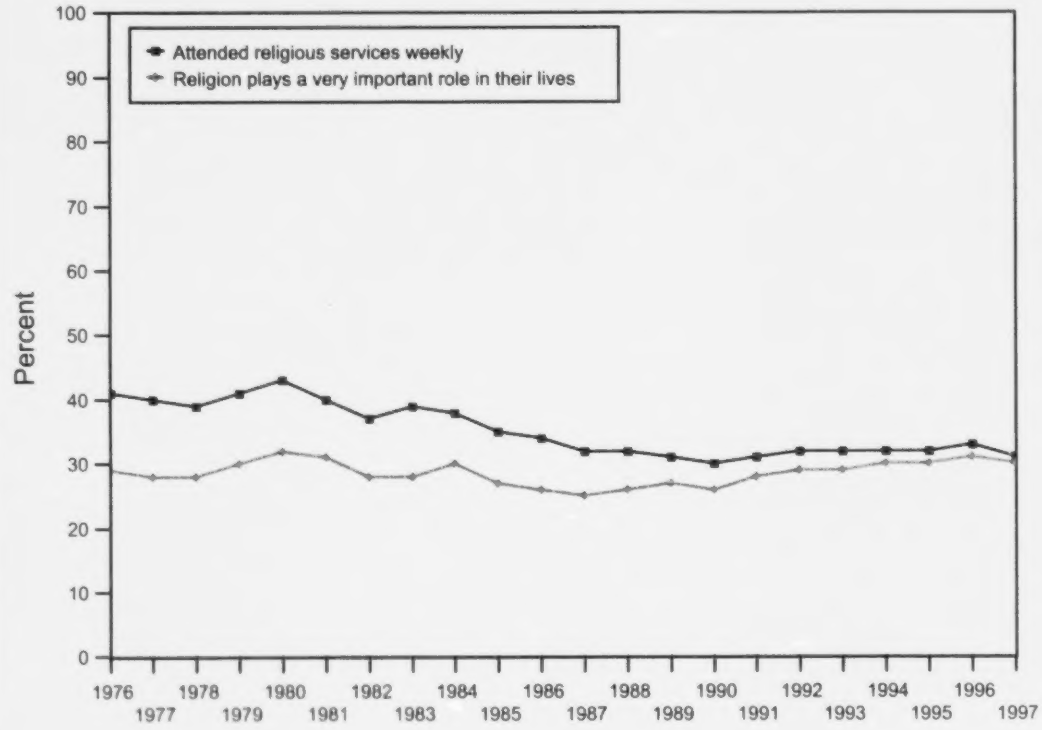
	1976	1981	1986	1991	1992	1993	1994	1995	1996	1997
8th Grade										
Total	—	—	—	29	27	30	30	30	32	32
Gender										
Male	—	—	—	27	26	27	29	28	29	30
Female	—	—	—	31	28	32	32	32	34	34
Race										
White	—	—	—	26	23	26	26	26	27	28
Black	—	—	—	46	46	42	47	45	47	48
10th Grade										
Total	—	—	—	29	28	29	28	29	29	30
Gender										
Male	—	—	—	26	26	26	24	26	26	28
Female	—	—	—	31	29	31	32	31	31	33
Race										
White	—	—	—	24	24	26	24	25	26	27
Black	—	—	—	52	50	50	48	49	47	48
12th Grade										
Total	29	31	26	28	29	29	30	30	31	30
Gender										
Male	24	25	23	24	26	26	27	27	27	26
Female	34	36	30	31	33	33	32	33	35	34
Race										
White	26	27	23	24	25	24	26	26	27	24
Black	51	51	51	50	51	51	49	52	55	55

Note: Data for 8th and 10th grades available since 1991.

Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1976-1997.. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. 8th and 10th grade 1991-1996 Questionnaire Forms 1 and 2, item C13 and 8th and 10th grade 1997 Questionnaire Core Questions, item C13; 12th grade 1976-1988 Questionnaire Forms 1-5; 12th grade 1989-1996 Questionnaire Forms 1-6, item C13C; and 12th grade 1997 Questionnaire Core Questions, item C13C.

Figure SD 1.3

Percentage of high school seniors in the United States reporting weekly religious attendance and reporting religion is important in their lives: 1976-1997



Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1976-1997. Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. 12th grade 1976-1988 Questionnaire Forms 1-5; 12th grade 1989-1996 Questionnaire Forms 1-6, items C13B and C13C; and 12th grade 1997 Questionnaire, Core Questions, items C13B and C13C.

SD 1.4

VOTING BEHAVIOR OF YOUNG ADULTS

Voting is a critical exercise of citizenship in a democracy. Measures of the voting behavior of young adults may be seen as indicators of the level of youth commitment to the democratic process.

Rates of reported voter registration and voting among 18- through 20-year-olds during presidential election years declined between 1972 and 1976 and have stayed rather flat through 1996 (see Table SD 1.4.A). In 1972, 58 percent of young adults ages 18 through 20 reported that they had registered to vote, and 48 percent reported that they had voted. By 1996, 46 percent reported that they had registered, and 31 percent reported that they had voted (see Figure SD 1.4.A).

Differences by Gender. Reported rates of voter registration and voting are modestly higher among women both over time and within racial and ethnic groups, particularly during presidential election years; for example, in 1996, 49 percent of females and 43 percent of males ages 18 through 20 reported that they had registered to vote (see Table SD 1.4.A).

Differences by Race and Hispanic Origin. Hispanic young adults are the least likely to report that they had register and vote. In 1996, 27 percent of Hispanic young adults reported that they had registered, and 16 percent reported that they had voted. Comparable numbers for blacks are 43 percent registered and 28 percent voted. Whites were the most likely to report that they had registered (47 percent) and voted (33 percent) in 1996 (see Figure SD 1.4.B). Since 1972, the percentage of Hispanic young adults who reported that they had voted in presidential election years has declined by almost one-half, from 30 percent to 16 percent (see Table SD 1.4.A).

Differences by Electoral Cycle. The percentage of young adults who reported that they had voted in nonpresidential election years since 1974 is substantially lower than the percentage who reported that they had voted during presidential election years (see Table SD 1.4.B). Rates of reported registration and voting have been remarkably stable during such years, across nonpresidential election years, with overall rates varying by only a few percentage points across the years.

Table SD 1.4.A

Percentage of persons ages 18 through 20 in the United States who reported that they had registered to vote and percentage who reported that they had voted in presidential election years, by race and Hispanic origin[a] and by gender: selected years, 1972-1996

	1972	1976	1980	1984	1988	1992	1996
Percentage who reported registering							
All races[a]							
Total	58	47	45	47	45	48	46
Male	58	46	44	45	42	47	43
Female	58	48	46	49	48	50	49
White							
Total	60	50	47	48	46	51	47
Male	61	48	45	46	43	49	45
Female	60	51	48	50	48	53	49
Black							
Total	43	34	35	47	43	43	43
Male	37	33	36	43	39	41	38
Female	49	35	35	51	46	44	46
Hispanic							
Total	38	29	20	25	25	23	27
Male	39	31	20	22	22	20	24
Female	37	27	20	28	27	27	31
Percentage who reported voting							
All races[a]							
Total	48	38	36	37	33	39	31
Male	48	36	35	34	31	37	28
Female	49	40	37	39	35	41	34
White							
Total	51	41	38	38	35	41	33
Male	51	39	36	35	32	39	30
Female	51	42	39	40	37	43	35
Black							
Total	31	23	25	36	28	32	28
Male	26	22	26	30	26	29	22
Female	35	24	25	41	30	34	34
Hispanic							
Total	30	22	13	18	16	16	16
Male	27	23	12	14	15	13	12
Female	32	21	15	21	16	19	20

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

Note: Current Population Survey figures routinely overestimate voter registration and turnout when compared to the official rates.

Sources: U.S. Bureau of the Census, *Current Population Reports*, Series P-20, No. 253, No. 293, No. 322, No. 344, No. 370, No. 405, No. 414, No. 453, No. 466, and PPL24-RV, "Voting and Registration in the Election of November," report series, U.S. Government Printing Office, Washington, D.C.; Casper, L.M., and Bass, L.E. 1998. "Voting and Registration in the Election of November 1996," *Current Population Reports* P20-504 and PPL-89. Washington, D.C.: U.S. Bureau of the Census.

Table SD 1.4.B

Percentage of persons ages 18 through 20 in the United States who reported that they had registered to vote and percentage who reported that they had voted in nonpresidential election years, by race and Hispanic origin[a] and by gender: selected years, 1974-1994

	1974	1978	1982	1986	1990	1994
Percentage who reported registering						
All races[a]						
Total	36	35	35	35	35	37
Male	36	34	35	34	34	36
Female	36	36	35	36	36	38
White						
Total	38	36	36	35	37	40
Male	38	36	37	34	36	39
Female	38	37	35	37	38	41
Black						
Total	28	28	31	39	30	32
Male	26	25	25	40	31	31
Female	29	30	36	39	30	34
Hispanic						
Total	20	19	20	20	17	20
Male	18	23	20	19	16	18
Female	22	16	21	21	19	24
Percentage who reported voting						
All races[a]						
Total	21	20	20	19	18	17
Male	21	20	20	18	18	16
Female	20	20	19	19	19	18
White						
Total	22	21	20	18	19	18
Male	23	21	22	18	19	17
Female	21	21	19	19	20	19
Black						
Total	14	15	18	21	15	13
Male	13	15	13	21	15	13
Female	14	15	21	20	15	13
Hispanic						
Total	12	11	12	10	10	11
Male	12	14	12	9	8	6
Female	13	8	13	12	12	16

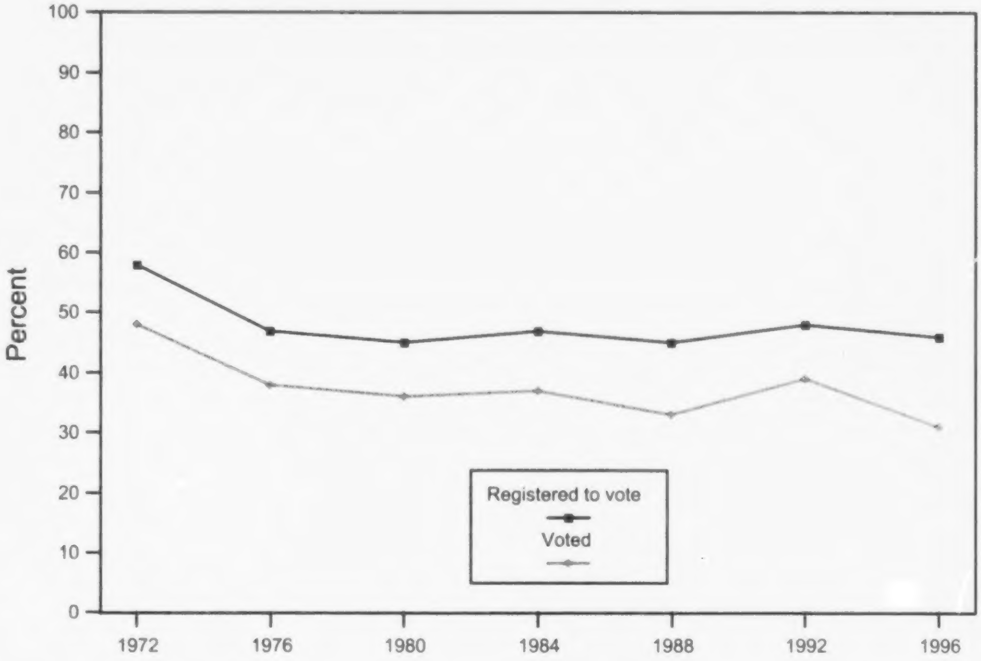
[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

Note: Current Population Survey figures routinely overestimate voter registration and turnout when compared to the official rates.

Sources: U.S. Bureau of the Census, *Current Population Reports*, Series P-20, No. 253, No. 293, No. 322, No. 344, No. 370, No. 405, No. 414, No. 453, No. 466, and PPL24-RV, "Voting and Registration in the Election of November 1972-1994." Washington, D.C.: U.S. Government Printing Office.

Figure SD 1.4.A

Percentage of persons ages 18 through 20 in the United States who reported that they had registered to vote and percentage who reported that they had voted in presidential election years: selected years, 1972-1996

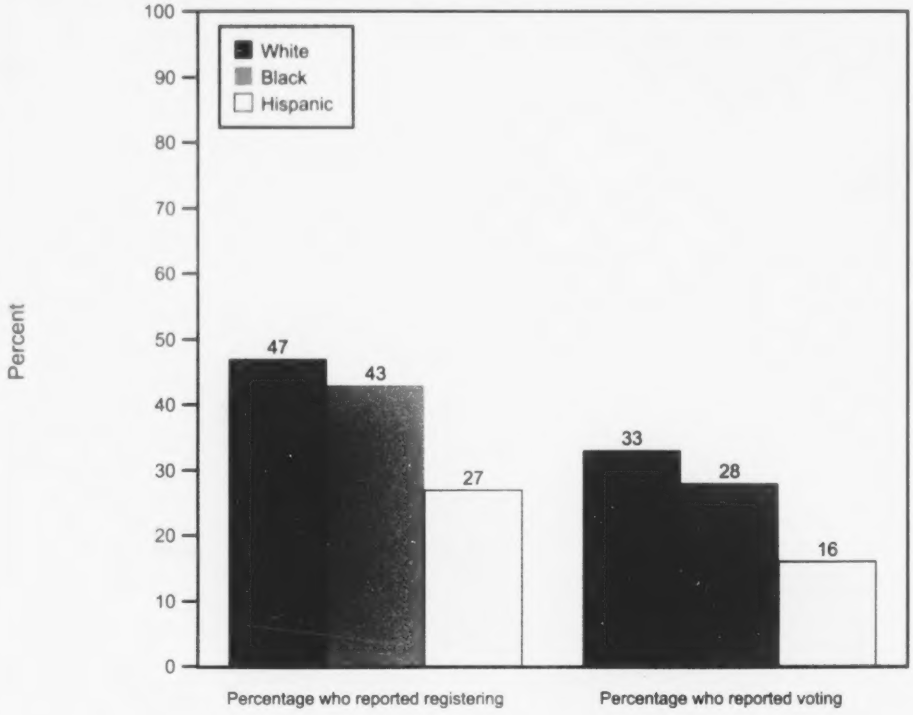


Note: Current Population Survey figures routinely over estimate voter registration and turnout when compared to the official rates.

Sources: U.S. Bureau of the Census, *Current Population Reports*, Series P-20, No. 253, No. 293, No. 322, No. 344, No. 370, No. 405, No. 414, No. 453, No. 466, and PPL24-RV, "Voting and Registration in the Election of November 1972-1994." Washington, D.C.: U.S. Government Printing Office.

Figure SD 1.4.B

Percentage of persons ages 18 through 20 in the United States who registered to vote and percentage who voted in presidential election year 1996, by race and Hispanic origin[a]



[a]Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

Note: Current Population Survey figures routinely overestimate voter registration and turnout when compared to the official rates.

Sources: Casper, L.M., and Bass, L.E. 1998. "Voting and Registration in the Election of November 1996," *Current Population Reports* P20-504 and PPL-89. Washington, D.C.: U.S. Bureau of the Census.

SD 1.5

TELEVISION VIEWING HABITS

Some studies indicate that excessive television watching is negatively related to the academic attainment of children and youth; for example, children and adolescents in grades 4, 8, and 11 who watch five or more hours of television per day have substantially lower test scores than other children on average.[5] Yet, as depicted in Figure SD 1.5, substantial percentages of students report watching large amounts of television on a daily basis. The content of the television programs the students watched was not reported.

Differences by Age. The percentage of children who report watching 6 hour more hours of television declines with age, as indicated in Figure SD 1.5. Among 9-year-olds, 18 percent reported watching six or more hours of television each day in 1996. Among 13-year-old students, 13 percent watched six or more hours of television. Among 17-year-olds, only 7 percent watched this amount of television each day. For all three age groups, the percentage of students spending six or more hours a day watching television increased between 1982 and 1986 and then declined through 1996.

Differences by Gender. Larger proportions of boys than girls at ages 9 and 13 are watching television for long periods of time (see Table SD 1.5.A). In 1996, 20 percent of 9-year-old boys watched television for six or more hours per day, compared with 15 percent of girls in that age group. A similar pattern is evident for 13-year-olds (see Table SD 1.5.B), while for 17-year-olds, the percentages of boys and girls watching television for long periods is the same, at 7 percent (see Table SD 1.5.C).

Differences by Race and Hispanic Origin.[6] For each age group and for each time point of assessment, larger proportions of black students watch television for six or more hours per day than do either white or Hispanic students; for example, among 9-year-old students, 39 percent of black students, compared with 13 percent of white students and 21 percent of Hispanic students, reported watching television six or more hours per day in 1996 (see Table SD 1.5.A).

Differences by Type of School. In general, smaller percentages of children and adolescents who attend private school spend six or more hours per day watching television than do students who attend public school. The differences between public and private school pupil television viewing habits are more pronounced among 9- and 13-year-old students (see Tables SD 1.5.A, SD 1.5.B, and SD 1.5.C).

Differences by Parents' Educational Level. Children's television viewing habits also vary by parents' educational level. In general, as parents' educational levels increase, the percentages of children watching 6 or more hours of television decline. In 1996, 18 percent of 13-year-olds whose parents had less than a high school education were watching six or more hours of television per day, compared with 13 percent of students with parents who graduated from high school and 10 percent of students whose parents graduated from college (see Table SD 1.5.B). A similar pattern is evident for 17-year-olds (see Table SD 1.5.C).

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[5] U.S. Department of Education, National Center for Education Statistics. 1994. *Youth Indicators 1993: Trends in the Well-Being of American Youth.* Washington, D.C.: U.S. Government Printing Office.

[6] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 1.5.A

Percentage of 9-year-old students in the United States who watch six or more hours of television per day, by gender, race and Hispanic origin[a], and type of school: selected years, 1982-1996

	1982	1986	1990	1992	1994	1996
Total	26	31	23	19	19	18
Gender						
Male	30	34	27	22	23	20
Female	23	27	20	17	16	15
Race and Hispanic origin[a]						
White, non-Hispanic	23	26	18	14	14	13
Black, non-Hispanic	43	53	47	41	40	39
Hispanic	28	33	26	25	22	21
Type of school						
Public	27	32	24	21	19	19
Private	21	24	18	5	11	7

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Note: Parents' education is not reported for 9-years-olds because approximately one-third of these students did not know their parents' education level.

Sources: Unpublished tables, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1996 Long-Term Trend Results, Math Assessment data; and unpublished Almanacs, 1978-1990.

Table SD 1.5.B

Percentage of 13-year-old students in the United States who watch six or more hours of television per day, by gender, race and Hispanic origin[a], type of school, and parents' highest level of education: selected years, 1982-1996

	1982	1986	1990	1992	1994	1996
Total	16	20	17	13	13	13
Gender						
Male	18	21	18	14	15	15
Female	15	19	15	11	12	11
Race and Hispanic origin[a]						
White, non-Hispanic	13	17	12	8	8	7
Black, non-Hispanic	32	40	35	31	35	35
Hispanic	19	21	18	19	19	17
Type of school						
Public	17	20	17	14	14	13
Private	13	*	11	6	4	3
Parents' highest level of education						
Less than high school	23	32	24	21	23	18
Graduated high school	18	22	19	16	17	13
More than high school	13	18	12	9	13	13
Graduated college	12	15	13	9	9	10

*Too few observations for a reliable estimate.

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Unpublished tables, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1996 Long-Term Trend Results, Math Assessment data; and unpublished Almanacs, 1978-1990.

Table SD 1.5.C

Percentage of 17-year-old students in the United States who watch six or more hours of television per day, by gender, race and Hispanic origin[a], type of school, and parents' highest level of education: selected years, 1978-1996

	1978	1982	1986	1990	1992	1994	1996
Total	5	6	9	9	7	8	7
Gender							
Male	5	7	10	9	7	10	7
Female	5	6	8	8	7	7	7
Race and Hispanic origin[a]							
White, non-Hispanic	4	5	6	6	4	5	4
Black, non-Hispanic	13	14	22	23	21	24	21
Hispanic	7	6	12	8	6	9	9
Type of school							
Public	5	7	9	9	7	8	7
Private	3	3	*	*	3	3	6
Parents' highest level of education							
Less than high school	8	10	17	11	10	14	15
Graduated high school	5	8	10	11	10	12	9
More than high school	4	4	9	8	5	8	6
Graduated college	3	4	4	5	5	5	6

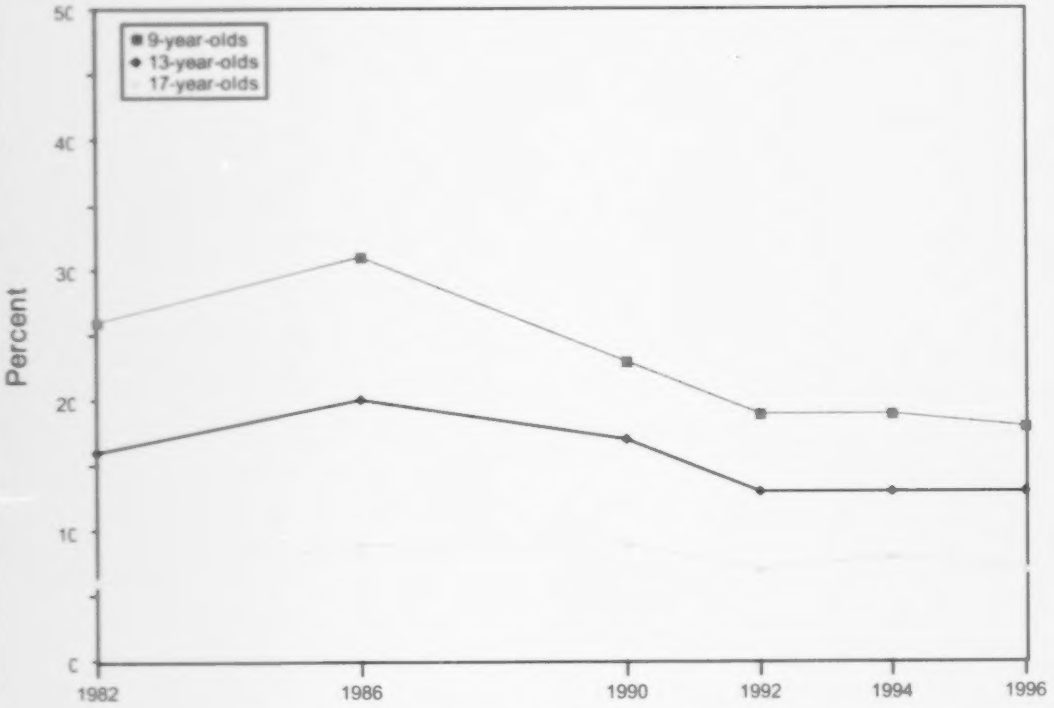
*Too few observations for a reliable estimate.

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Unpublished tables, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1996 Long-Term Trend Results, Math Assessment data; and unpublished Almanacs, 1978-1990.

Figure SD 1.5

Percentage of students in the United States who watch six or more hours of television per day, by age: selected years, 1982-1996



Sources: Unpublished tables, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1996 Long- Term Trend Results, Math Assessment data; and unpublished Almanacs, 1978-1990.

SD 1.6

YOUTH VIOLENT CRIME ARREST RATES[7]

The Federal Bureau of Investigation's Violent Crime Index includes murder, forcible rape, robbery, and aggravated assault.[8] The rate of youth arrests for these Index crimes increased substantially between 1980 and 1994, from 334 to 528 per 100,000 persons ages 10 through 17, and has been declining since to where it stood in 1997 at 407 per 100,000 persons ages 10 through 17 (see Table SD 1.6).

Differences by Age and Gender. Arrest rates for Violent Index crimes have consistently been much higher among males than among females over time and across all ages (see Figure SD 1.6). Rates for both males and females increased considerably between 1980 and 1994 for males and 1995 for females, with declines in the past several years for both genders. In 1997, rates for males and females were 670 and 132 per 100,000, respectively (see Table SD 1.6).

Youth Violent Crime Index arrest rates climb quickly and steadily with age for males, from 130 per 100,000 for 10- through 12-year-olds to 1,487 per 100,000 among 17-year-olds in 1997 (see Table SD 1.6). The rates for young women in 1997 also increase with age, peaking at age 16 with 233 arrests per 100,000, then declining to 228 per 100,000 for females age 17. Girls ages 10 through 12 are the least likely to be arrested for violent crimes, with only 9 per 100,000 arrested in 1997.

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[7] Arrests for violent crimes were chosen in preference to other arrest measures as an indicator both because of the particular hazards that violent crime represents to our society and because arrests for violent crimes are less likely to be affected over time by changes in police practice and policy than other types of crime.

[8] Violent crimes in addition to the four included in the FBI's Violent Crime Index, including kidnapping, extortion, and forcible sodomy, are not included in this indicator.

Table SD 1.6

Violent crime[a] arrest rates for youth ages 10 through 17 in the United States, by gender and age (per 100,000): selected years, 1980-1997

	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Total										
Ages 10-17	334	303	429	462	483	506	528	512	465	407
Ages 10-12	46	56	71	79	86	86	92	89	81	78
Ages 13-14	261	252	368	405	445	462	494	462	410	368
Age 15	504	446	670	733	770	829	858	810	732	606
Age 16	639	566	876	935	994	1,029	1,056	1,022	907	796
Age 17	740	651	983	1,066	1,057	1,110	1,114	1,110	1,023	867
Male										
Ages 10-17	588	530	740	798	826	858	889	856	773	670
Ages 10-12	82	99	120	135	145	145	154	148	134	130
Ages 13-14	446	426	604	669	726	745	794	738	650	577
Age 15	875	772	1,144	1,251	1,292	1,387	1,422	1,331	1,197	978
Age 16	1,133	997	1,535	1,637	1,731	1,777	1,810	1,734	1,532	1,334
Age 17	1,326	1,166	1,758	1,910	1,878	1,957	1,951	1,934	1,762	1,487
Female										
Ages 10-17	70	67	104	111	126	139	152	154	145	132
Ages 10-12	3	4	7	8	9	10	10	11	10	9
Ages 13-14	47	53	77	83	96	108	122	117	108	99
Age 15	63	55	88	94	112	119	131	135	123	113
Age 16	130	115	187	209	220	250	266	268	257	233
Age 17	131	114	184	189	211	225	247	250	248	228

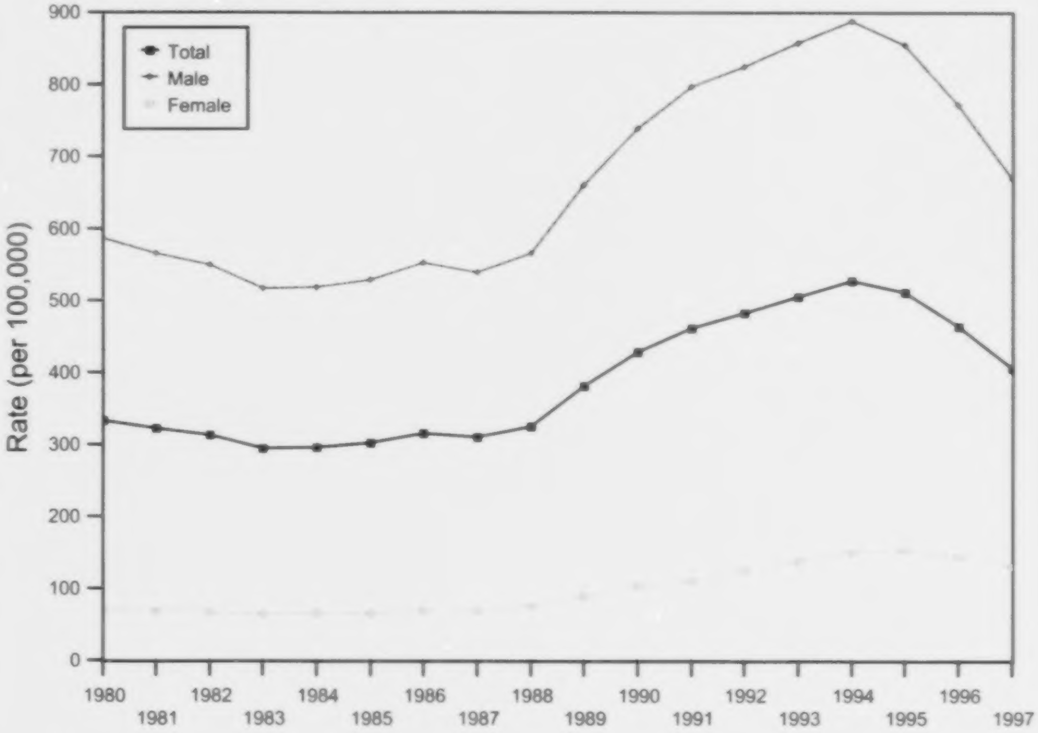
[a] Violent crimes include murder, forcible rape, robbery, and aggravated assault.

Note: Estimates in this table may not be comparable to estimates provided in previous issues of *Trends in the Well-Being of America's Children and Youth* due to changes in the population estimates provided by the U.S. Bureau of the Census.

Sources: Special analysis by Howard N. Snyder, National Center for Juvenile Justice, 1999, using published and unpublished arrest data from the FBI Uniform Crime Reporting Program and population data from the U.S. Bureau of the Census. A portion of this table was originally published in Snyder, H. 1998. *Juvenile Arrests 1997.* Washington, D.C.: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.

Figure SD 1.6

Violent crime[a] arrest rates for youth ages 10 through 17 in the United States, by gender (rate per 100,000): 1980-1997



[a] Violent crimes include murder, forcible rape, robbery, and aggravated assault.

Note: Estimates in this figure may not be comparable to estimates provided in previous issues of *Trends in the Well-Being of America's Children and Youth* due to changes in the population estimates provided by the U.S. Bureau of the Census.

Sources: Special analysis by Howard N. Snyder, National Center for Juvenile Justice, 1999, using published and unpublished arrest data from the FBI Uniform Crime Reporting Program and population data from the U.S. Bureau of the Census. A portion of this data was originally published in Snyder, H. 1998. *Juvenile Arrests 1997.* Washington, D.C.: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.

SD 1.7

LOW-RISK TEEN CUMULATIVE RISK INDEX[9]

Statistics often show rates of individual problem behaviors among adolescents, such as drug or alcohol use, school dropout, or early sexual activity. Yet youth engaged in one problem behavior are often engaged in others as well; their risk of immediate and long-term harm increases as the number of risky behaviors increases.[10]

Most parents and other members of society believe that the ideal is for youth to avoid all risky behaviors. The Low-Risk Teen Cumulative Risk Index is designed to identify the degree to which adolescents avoid a set of key problem behaviors simultaneously. This measure is created from 1995 youth-report data for five behaviors, where a youth is defined as having no risks if he or she:

- Has not been suspended or expelled from school,
- Has never had sexual intercourse,
- Has never used illegal drugs (including marijuana, cocaine, inhalants, heroin, PCP, ecstasy, amphetamines, LSD, mushrooms, and pills),
- Has never drunk alcohol unsupervised by adults, and
- Has never smoked cigarettes regularly (at least once a day for 30 days).

Differences by Age. The proportion of young people who report avoiding all of these risk behaviors decreases with age (see Figure SD 1.7). By age 15 (by the 15th birthday), slightly more than half of responding young people (53 percent) have avoided all five risk behaviors, and 32 percent have experienced two or more risks. By age 17 (by the 17th birthday), an age at which most young people are still in high school, the proportion with no risks drops to 29 percent, and nearly half (45 percent) have now experienced two or more risk behaviors. Once youth reach their 18th birthday, only 22 percent report having engaged in no risk behaviors, while 48 percent report two or more such behaviors. Table SD 1.7 presents additional data on the percentage who report only one, and two or more, risk behaviors.

No Risk Behaviors by Gender, Family Structure, and Family Income. Across the adolescent years, more girls than boys report being free of any of the five risk behaviors. Similarly, children from two-parent families are more likely than children in single-mother families to avoid risky behaviors. Family income is another mitigating factor, with children in mid- to high-income families somewhat more likely than others to report that they avoid risk behaviors (see Table SD 1.7).

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[9] This measure uses different source data than a similar risk index presented in previous editions of this publication and should not be compared.

[10] Moore, K.A., and Glei, D.A. 1994. "Taking the Plunge: An Examination of Positive Youth Development." *Journal of Adolescent Research* 10 (11): 15-40.

Table SD 1.7

Percentage of youth by their 12th through 18th birthdays in the United States who have engaged in selected risk[a] behaviors, by age,[b] gender, family structure, and family income: 1995

	By Age 12	By Age 13	By Age 14	By Age 15	By Age 16	By Age 17	By Age 18
All respondents							
No risks	87	79	66	53	40	29	22
Only one risk	3	5	10	15	21	26	30
Two or more risks	10	16	24	32	39	45	48
Respondents with no risks							
Gender							
Male	84	75	62	49	37	27	21
Female	92	84	71	57	44	32	23
Family structure[c]							
Two parents	91	85	73	61	48	36	28
Single-mother	84	73	58	43	32	23	16
Other	82	72	57	42	31	20	15
Family income							
$15,000 and under	85	76	63	48	37	27	20
$15,001-$35,000	85	76	62	52	39	28	22
$35,001-$50,000	90	82	70	57	43	31	26
$50,001 and over	92	85	72	58	45	33	23

[a] Risks are drawn from youth reports of selected behaviors in the 1995 National Longitudinal Study of Adolescent Health. The behaviors examined for this cumulative index are suspension or expulsion from school, engaging in sexual intercourse, use of illegal drugs, unsupervised consumption of alcohol, and regular smoking of tobacco cigarettes. A status of "no risks" indicates that a youth reported involvement in none of the five tracked behaviors for each of the age periods specified.

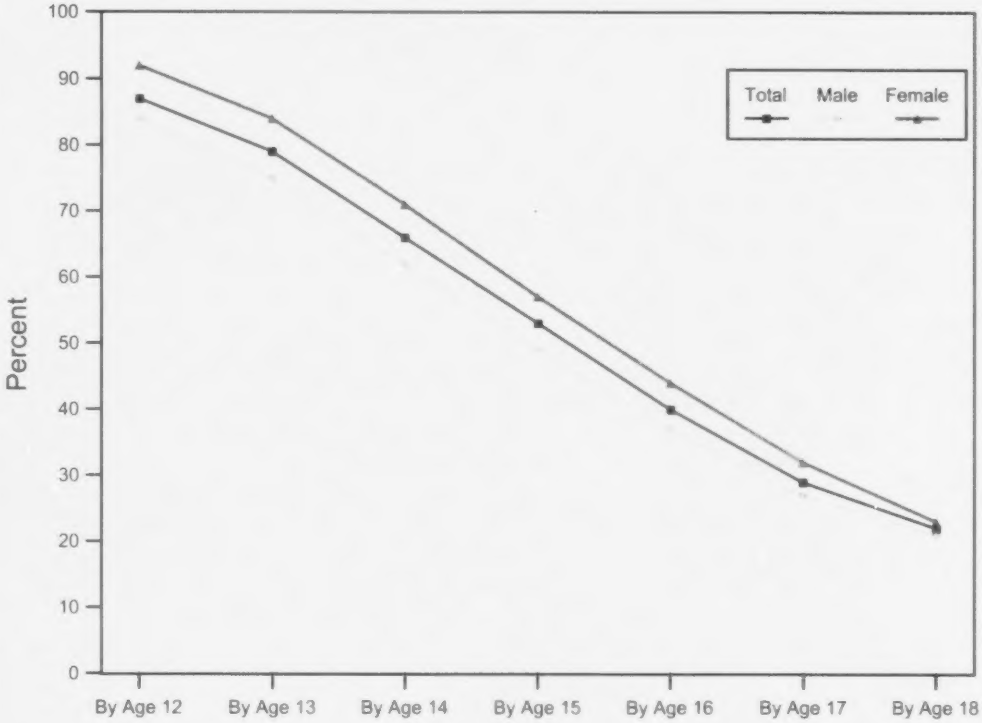
[b] Age breaks for this indicator represent percentages of youth who have engaged (or not engaged) in the specified behaviors by the indicated birthdays.

[c] "Two parents" includes biological and adoptive parents only. The "other" category includes all family types that are not households with two biological or adoptive parents from birth, or female single-parent households. Stepfamilies, single-father families, and children living with their grandparents are included as "other" families in Table SD 1.7.

Source: The National Longitudinal Study of Adolescent Health (Add Health) Wave 1, 1995, tabulations by Child Trends.

Figure SD 1.7

Percentage of youth by their 12th through 18th birthdays in the United States with no risks[a] on cumulative risk measure, by age[b] and gender: 1995



[a] Risks are drawn from youth reports of selected behaviors in the 1995 National Longitudinal Study of Adolescent Health. The behaviors examined for this cumulative index are suspension or expulsion from school, engaging in sexual intercourse, use of illegal drugs, unsupervised consumption of alcohol, and regular smoking of tobacco cigarettes. A status of "no risks" indicates that a youth reported involvement in none of the five tracked behaviors for each of the age periods specified.

[b] Age breaks for this indicator represent percentages of youth who have engaged (or not engaged) in the specified behaviors by the indicated birthdays.

Source: The National Longitudinal Study of Adolescent Health (Add Health) Wave 1, 1995, tabulations by Child Trends.

SD 1.8

CLOSENESS WITH PARENTS

The quality of relationships that youth have with parents is important for several aspects of their development; for example, a positive parent-child relationship can promote an adolescent's ability to handle stress.[11] Recent research suggests that closeness with parents serves as a protective factor against emotional distress, substance use, early sexual activity, and suicide thoughts or attempts.[12]

Analyses based on data from the 1995 National Longitudinal Study of Adolescent Health allow for an examination of how emotionally close adolescents feel to their biological and nonbiological mothers and fathers. The data presented in Table SD 1.8 show the proportion of youth ages 12 through 17 who report feeling "very close" to their biological and non-biological parents, resident and nonresident.

Differences by Age. More young adolescents report feeling very close to parents than do older adolescents; for example, more youth ages 12 through 14 (78 percent) report a very close relationship with their resident biological mother than do youth ages 15 through 17 (66 percent). Similar patterns are found for reports of closeness to resident and nonresident biological fathers, as well as resident nonbiological parents (see Figure SD 1.8).

Differences by Gender. Males report feeling closer to their parents than do females; for example, 74 percent of adolescent males compared with 65 percent of adolescent females report feeling very close to their resident biological mothers. Similarly, 64 percent of adolescent males report feeling very close to their resident biological fathers, compared with 51 percent of female youth.

Differences by Race and Hispanic Origin.[13] More black and Hispanic youth than white youth report feeling very close to their mothers or mother figures; for example, 78 percent of black adolescents and 74 percent of Hispanic adolescents report feeling very close to their resident biological mother, while only 68 percent of white adolescents report a similar relationship with their resident biological mother. Feelings of closeness with fathers followed the same pattern, with black and Hispanic youth reporting closer relationships than white youth. However, the variations by race or Hispanic origin were not as pronounced for fathers as for mothers (see Table SD 1.8).

Differences by Socioeconomic Status. Generally speaking, youth from low-income families were more likely than other youth to report being very close to their resident parents (biological and nonbiological); for example, youth whose parents earned between $5,000 and $9,999 per year were more likely to report very close relationships with their resident biological mother (78 percent) and father (66 percent) than were youth whose parents earned $25,000 to $34,999 per year (68 percent and 59 percent for resident biological mother and father, respectively). Similar patterns are observed when considering parent education levels of resident parents. For example, youth of parents with a high school education or less were closer to their resident mothers than were youth of more highly educated parents (see Table SD 1.8).

Differences by Status of Parent. More adolescents report feelings of closeness with resident than with nonresident biological parents. Furthermore, adolescents report feeling closer to nonbiological resident parents than nonresident biological parents. For example, 70 percent of youth report feeling very close to their resident biological mother, compared with 61 percent who report feeling very close to their resident nonbiological mother and 37 percent who report feeling very close to their nonresident biological mother. Similar patterns exist for fathers and father figures.

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[11] Hawes, D. 1996. "Who Knows Who Best: A Program to Stimulate Parent-Teen Interaction." *School Counselor* 44 (2): 115-121.

[12] Resnick, M.D., et al. 1997. "Protecting Adolescents from Harm: Findings from the National Longitudinal Study on Adolescent Health." *Journal of the American Medical Association* 278 (10): 823-832.

[13] Estimates of whites and blacks exclude Hispanics of those races.

Table SD 1.8

Percentage of youth ages 12 through 17 in the United States who report feeling very close to their parents, by parent type and by age, gender, race and Hispanic origin[a], parents' education, and socioeconomic status: 1995

	Resident Biological Mother	Resident Non-Biological Mother	Non-resident Biological Mother	Resident Biological Father	Resident Non-Biological Father	Non-resident Biological Father
Total	70	61	37	58	34	21
Age						
12-14	78	71	38	68	44	29
15-17	66	58	37	53	29	18
Gender						
Male	74	64	41	64	40	25
Female	65	57	32	51	29	17
Race and Hispanic origin[a]						
White, non-Hispanic	68	58	31	58	34	20
Black, non-Hispanic	78	65	55	61	33	22
Hispanic	74	67	41	59	35	24
Other[b]	64	63	29	53	43	20
Education of most educated parent						
Less than high school	75	68	38	60	47	19
High school graduate	72	63	42	59	36	20
Some college or postsecondary	67	59	27	54	24	18
College graduate or more	67	56	37	57	34	24
Annual household income						
Less than $5,000	78	74	48	77	72	31
$5,000 - $9,999	78	57	36	66	54	23
$10,000 - $14,999	75	71	44	56	36	15
$15,000 - $24,999	73	72	38	60	43	20
$25,000 - $34,999	68	49	42	59	32	17
$35,000 - $49,999	72	51	33	62	34	24
$50,000 - $74,999	67	53	47	57	28	23
$75,000 - $99,999	65	61	36	56	33	20
$100,000 and above	64	56	20	53	33	27

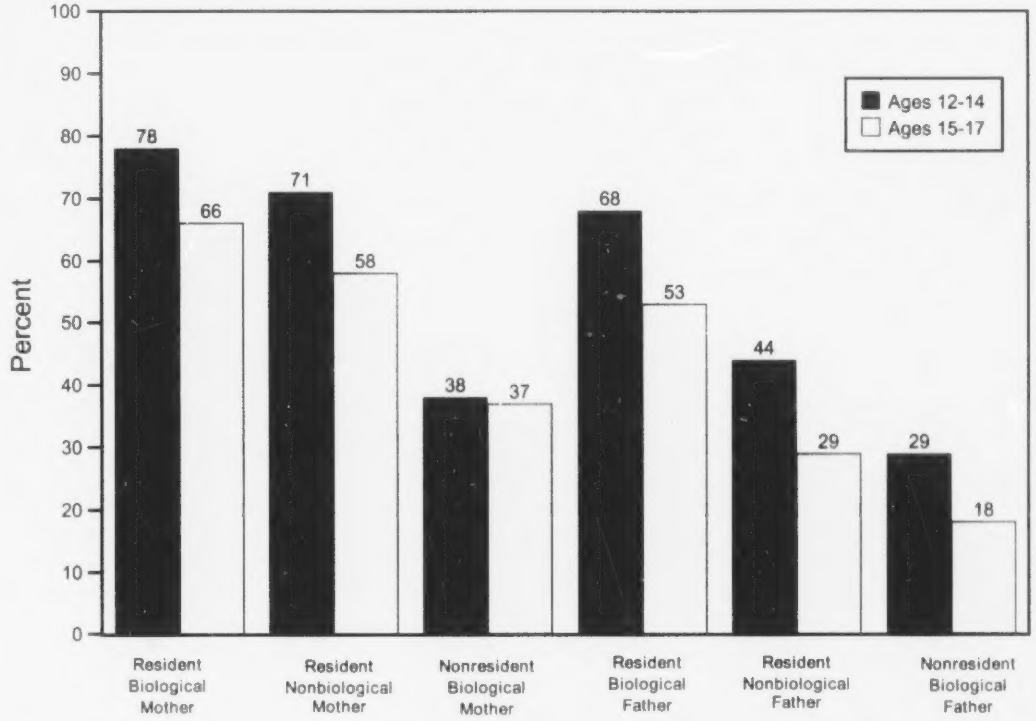
[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] "Other" race category includes respondents who chose Asian, American Indian, or other race and also did not identify themselves (in a separate question) as Hispanic.

Source: The National Longitudinal Study of Adolescent Health (Add Health) Wave 1, 1995, tabulations by Child Trends.

Figure SD 1.8

Percentage of youth ages 12 through 17 in the United States who report feeling very close to their parents, by age and parent type: 1995



Source: The National Longitudinal Study of Adolescent Health (Add Health) Wave 1, 1995, tabulations by Child Trends.

SD 1.9
PARENTS' ACTIVITIES WITH CHILDREN

Mothers and fathers are active in children's lives in a variety of ways. In addition to providing for children's basic care and protection, parents also serve as important teachers, mentors, role models, playmates, companions, and confidantes. The common theme of these additional roles is the direct interaction that takes place between parent and child in various contexts. Recent research indicates that positive interactions between parents and children foster positive developmental outcomes for children.[14] Furthermore, there is a growing interest in identifying ways that fathers' involvement in children's lives uniquely contributes to child well-being.[15]

Data from the first and second waves of the National Survey of Families and Households (NSFH 1988 and 1995) were used to examine mothers' and fathers' interactions with their children (ages 5 through 17) in daily activities. Activities included eating meals together, spending time in activities away from home, working on a project together, having private talks, and helping with reading or homework.

As shown in Table SD 1.9.A, findings from the 1995 data include the following:

- Over half of mothers (55 percent) and two-fifths of fathers (42 percent) eat dinner with their child every day of the week.
- A similar percentage of mothers and fathers report going on outings with their child several times a week (17 percent and 18 percent for mothers and fathers, respectively) as well as almost every day (7 percent and 5 percent, respectively).
- Twenty percent of mothers and 12 percent of fathers worked on a project at home with their child almost every day. An additional 32 percent of mothers and 28 percent of fathers worked on a project with their child several times a week.
- The majority of mothers often engage their children in private conversations, with 22 percent reporting having private talks almost every day and another 31 percent reporting private talks several times a week. Among fathers, 27 percent reported having private talks with their children at least several times a week.
- Mothers are also frequently helping their children with homework and reading. Forty percent report this type of interaction on an almost daily basis, with an additional 29 percent reporting helping their child with homework several times a week. One-third (33 percent) of fathers also report helping with homework several times a week, with a smaller group (13 percent) reporting helping almost every day.

Trends in Parental Activities. There was a significant drop in high levels of parent-child activity between 1988 and 1995 in most activities (see Table SD 1.9.A); for example, 62 percent of mothers reported eating dinner with their child on a daily basis in 1988, but in 1995 only 55 percent reported doing so. Similarly, 50 percent of fathers ate a daily dinner with their child in 1988, but in 1995 this rate dropped to 42 percent. Another example involves the rate at which parents engage their children in private talks. There was a 7 percentage point drop (from 29 to 22 percent) between 1988 and 1995 in the proportion of mothers who had private talks with their children almost every day. Similarly, there was a 5 percentage point drop (from 11 to 6 percent) in the proportion of fathers who had almost daily private talks with their children. Decreases in the amount of time parents spend in activities outside the home and working on projects inside the home were also found.

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[14] Hawes, D. 1996. "Who Knows Who Best: A Program to Stimulate Parent-Teen Interaction." *School Counselor* 44 (2), 115-121.

[15] Lamb, M.E. 1997. "Fathers and Child Development: An Introductory Overview and Guide." In M.E. Lamb (Ed.), *The role of the father in child development* (pp. 1-18). New York: John Wiley & Sons, Inc.

Differences by Race and Hispanic Origin.[16] In 1995, white (55 percent) and Hispanic mothers (65 percent) were more likely than black mothers (49 percent) to report eating dinner with their child every day (see Table SD 1.9.B). Other racial/ethnic differences were also evident; for example, Hispanic mothers (17 percent) were more likely than white mothers (7 percent) to go on outings with their children almost every day in 1995 (see Table SD 1.9.B). On the other hand, black mothers (50 percent) were more likely than white mothers (38 percent) to help their children with homework or reading almost every day (see Figure SD 1.9). In general, father involvement in 1995 did not appear to vary by race and Hispanic origin; however, black fathers (11 percent) were more likely than white fathers (4 percent) to take their children on outings almost every day (see Table SD 1.9.B).

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[16] Estimates of whites and blacks exclude Hispanics of those races.

Table SD 1.9.A

Percentage of parents in the United States who engage in selected activities with their children ages 5 through 17, by parent and type of activity: 1988 and 1995

	Mothers		Fathers	
	1988	1995	1988	1995
Days per week eat dinner with at least one child				
0 days	2	2	4	3
1-3 days	9	10	13	15
4-6 days	27	33	33	39
Every day	62	55	50	42
Time spent with children in activities away from home				
Never or rarely	6	5	6	5
Once a month or less	15	20	18	24
Several times a month	25	29	25	29
About once a week	23	22	26	20
Several times a week	18	17	15	18
Almost every day	13	7	9	5
Time spent with children at home working on a project				
Never or rarely	4	4	5	3
Once a month or less	9	9	10	13
Several times a month	14	17	17	27
About once a week	14	18	17	17
Several times a week	28	32	33	28
Almost every day	31	20	18	12
Time spent with children having private talks				
Never or rarely	2	2	8	7
Once a month or less	7	7	17	19
Several times a month	14	17	20	23
About once a week	18	22	22	24
Several times a week	29	31	21	21
Almost every day	29	22	11	6
Time spent with children helping with reading or homework				
Never or rarely	9	7	15	10
Once a month or less	6	6	13	13
Several times a month	9	8	17	16
About once a week	11	11	16	16
Several times a week	27	29	26	33
Almost every day	38	40	14	13

Source: The National Survey of Families and Households (NSFH), Wave 1, 1988, and Wave 2, 1995, tabulations by Randal Day, Washington State University.

Table SD 1.9.B

Percentage of parents in the United States who engage in selected activities with their children ages 5 through 17, by parent, race and Hispanic origin,[a] and type of activity: 1995

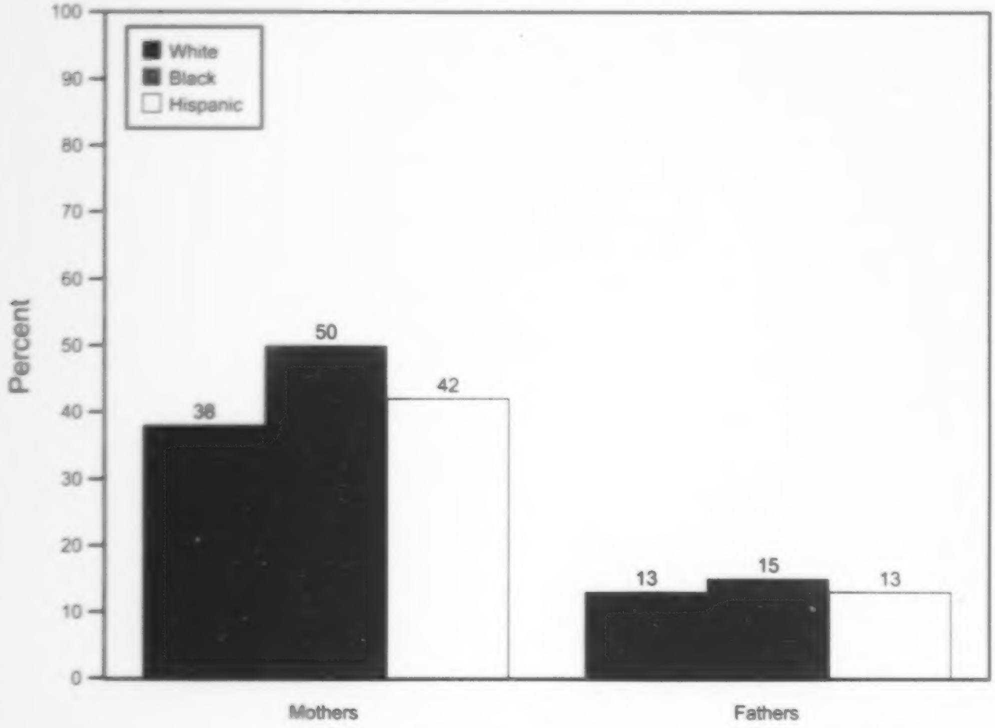
	Mothers			Fathers		
	White	Black	Hispanic[a]	White	Black	Hispanic[a]
Days per week eat dinner with at least one child						
0 days	1	5	1	3	9	2
1-3 days	9	15	9	14	23	19
4-6 days	34	32	24	40	35	37
Every day	55	49	65	43	34	43
Time spent with children in activities away from home						
Never or rarely	4	9	11	4	11	8
Once a month or less	19	22	19	22	26	28
Several times a month	30	27	20	31	26	22
About once a week	23	21	21	21	12	24
Several times a week	19	12	12	19	15	12
Almost every day	6	9	17	4	11	5
Time spent with children at home workingon a project						
Never or rarely	3	5	7	2	7	2
Once a month or less	9	8	8	11	23	12
Several times a month	17	21	14	29	18	27
About once a week	18	22	17	18	13	18
Several times a week	34	24	25	28	25	32
Almost every day	19	20	29	12	14	8
Time spent with children having private talks						
Never or rarely	2	2	5	6	10	7
Once a month or less	7	9	7	20	17	17
Several times a month	17	15	18	23	19	23
About once a week	22	22	18	24	26	23
Several times a week	31	30	29	21	22	23
Almost every day	21	22	23	6	7	7
Time spent with children helping with reading or homework						
Never or rarely	7	6	7	9	19	9
Once a month or less	6	5	6	14	9	9
Several times a month	9	7	9	16	14	16
About once a week	11	9	16	15	13	21
Several times a week	31	23	20	33	31	32
Almost every day	38	50	42	13	15	13

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: The National Survey of Families and Households (NSFH), Wave 2, 1995, tabulations by Randal Day, Washington State University.

Figure SD 1.9

Percentage of parents in the United States with children ages 5 through 17 who help their child with homework almost every day, by gender of parent and race and Hispanic origin:[a] 1995



[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: The National Survey of Families and Households (NSFH), Wave 2, 1995, tabulations by Randal Day, Washington State University.

SD 2.1

PHYSICAL FIGHTING BY YOUTH

Physical violence is a major cause of injury and homicide among adolescents.[17] In 1997, almost half of all male students and one-quarter of female students in grades 9 through 12 reported having been involved in a physical fight during the previous year. However, the percentage of all students who reported involvement in a fight decreased significantly between 1991 and 1997, from 43 percent to 37 percent. For males, the percentage decreased from 50 percent in 1991 to 46 percent in 1997 (see Figure SD 2.1).

Differences by Age. For all the years included in Table SD 2.1, the percentage of students who reported being involved in fights decreased with age. In 1997, 45 percent of 9th-grade students and 29 percent of 12th-grade students reported being involved in a fight. It is unclear, however, whether this pattern reflects the effects of increasing maturity, a change in the propensity to report having been in a fight, or a tendency for violence-prone youth to drop out of school, leaving a less violent pool of students in the higher grades.

Differences by Race.[18] In 1997, 34 percent of white students reported involvement in a physical fight within the past year, compared with 43 percent of black students and 41 percent of Hispanic students (see Table SD 2.1).

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[17] Injuries were the leading cause of death for 15- to 19-year-olds in 1995 and 1996, accounting for 80 percent of all deaths. Injury-related mortality includes death from motor vehicle crashes, fires and burns, drowning, suffocation, and accidents caused by firearms and other explosive materials, among others. The rate of death from homicide for youth ages 15 through 19 more than doubled between 1970 and 1994 but decreased 37 percent between 1994 and 1997. (See, for injury-related and homicide mortality, the report section "Health Conditions and Health Care," indicators HC 1.2 and HC 1.4, this report). See also: University of California at Los Angeles, CDC (Centers for Disease Control and Prevention). "The Epidemiology of Homicide in Los Angeles, 1970-79." Atlanta: U.S. Department of Health and Human Services, Public Health Service, CDC, 1985. Cited in *Chronic Disease and Health Promotion, Reprints from the Morbidity and Mortality Weekly Report: 1990-1991 Youth Risk Behavior Surveillance System.* Atlanta: U.S. Department of Health and Human Services, Public Health Service, CDC, 1992, p. 37.

[18] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 2.1

Percentage of students in grades 9 through 12 in the United States reporting that they have been in a physical fight within the past year, by gender, grade, and race and Hispanic origin[a]: 1991, 1993, 1995, and 1997

	1991			1993		
	Total	Male	Female	Total	Male	Female
Total	43	50	34	42	51	32
Grade						
9	51	58	43	50	59	41
10	43	50	35	42	52	32
11	43	51	35	41	52	28
12	34	42	25	35	43	27
Race and Hispanic origin[a]						
White, non-Hispanic	41	49	32	40	50	30
Black, non-Hispanic	51	58	44	50	58	42
Hispanic	41	49	35	43	52	34

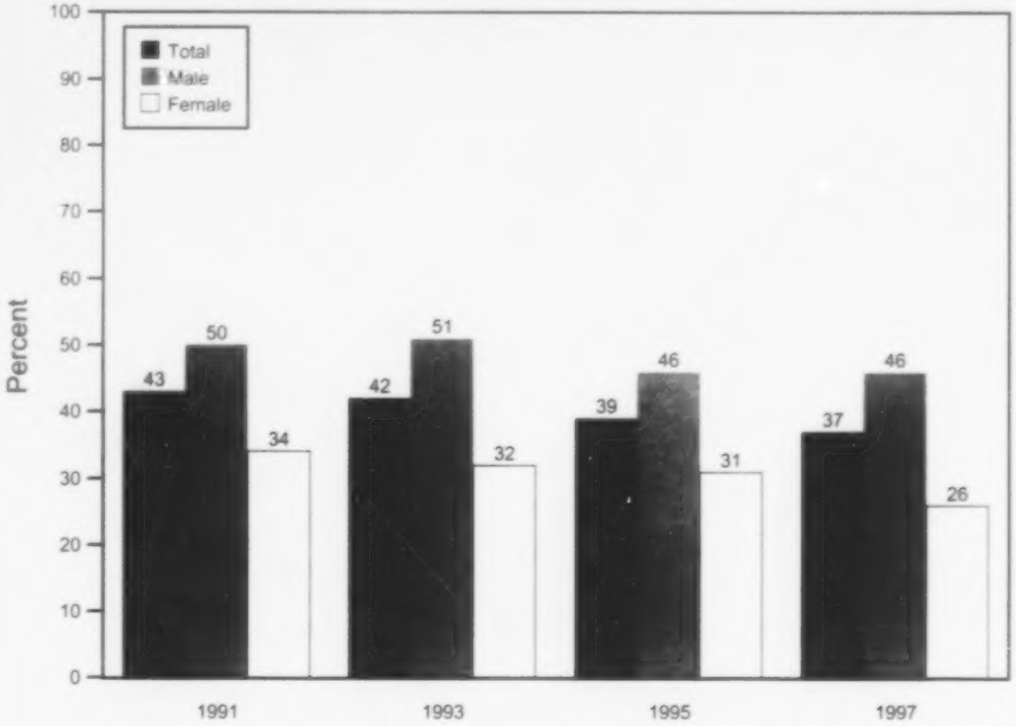
	1995			1997		
	Total	Male	Female	Total	Male	Female
Total	39	46	31	37	46	26
Grade						
9	47	55	37	45	56	32
10	40	46	34	40	48	30
11	37	46	28	34	44	23
12	31	38	24	29	37	19
Race and Hispanic origin[a]						
White, non-Hispanic	36	44	27	34	43	21
Black, non-Hispanic	42	49	35	43	49	38
Hispanic	48	56	40	41	50	30

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Unpublished tabulations of the Youth Risk Behavior Surveillance System (YRBSS) provided by the Division of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention. Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 6, p. 26; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 6, p. 35; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 6, p. 41.

Figure SD 2.1

Percentage of students in grades 9 through 12 in the United States reporting that they have been in a physical fight within the past year, by gender: 1991, 1993, 1995, and 1997



Sources: Unpublished tabulations of the Youth Risk Behavior Surveillance System (YRBSS) provided by the Division of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and prevention. Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 6, p. 26; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 6, p. 35; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 6, p. 41.

SD 2.2

WEAPON CARRYING AMONG HIGH SCHOOL YOUTH

Weapon carrying is associated with the most serious injuries resulting from violence. Carrying a weapon significantly increases the risk that a violent argument will result in death, disability, or other serious injury.[19]

Since 1991, the percentage of students who report carrying a weapon such as a gun, knife, or club at least once in the past month has declined; for example, in 1997, 18 percent of students in grades 9 through 12 reported carrying a weapon, compared with 26 percent in 1991 (see Table SD 2.2A).

Differences by Age. In general, students in the lower grades are more likely than students in the upper grades to carry a weapon. In 1997, 23 percent of 9th-graders reported having carried a weapon in the past 30 days, compared with 15 percent of 12th-graders.

Differences by Gender. High school males are much more likely than females to carry a weapon. This is true across all grades and for all racial and ethnic groups (see Figure SD 2.2.A); for example, in 1997, 28 percent of males in grades 9 through 12 reported carrying a weapon, compared with 7 percent of females.

Differences by Race and Hispanic Origin.[20] In 1997, 17 percent of white, 22 percent of black, and 23 percent of Hispanic students reported having carried a weapon. For white and black students, these represent reductions from 1991 rates of 25 and 33 percent, respectively.

Youth Who Report Carrying a Gun. The number of students who reported carrying a gun at some time in the past 30 days declined significantly between 1993 and 1997. In 1997, 6 percent of high school students reported having carried a gun, including 9 percent of black students, 10 percent of Hispanic students, and 4 percent of white students (see Table SD 2.2.B).

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[19] "Measuring the Health Behavior of Adolescents: The Youth Risk Behavior Surveillance System and Recent Public Health Reports on High-Risk Adolescents." *Public Health Reports* 108 (Supp. 1). Rockville, Md.: Public Health Service, 1993.

[20] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 2.2.A (Part 1)

Percentage of students in grades 9 through 12 in the United States who reported having carried a weapon[a] at least once within the past 30 days, by gender, grade, and race and Hispanic origin[b]: 1991, 1993, 1995, and 1997

	1991			1993		
	Total	Male	Female	Total	Male	Female
Total	26	41	11	22	34	9
Grade						
9	28	44	10	26	39	11
10	27	42	11	21	33	10
11	29	44	13	22	33	9
12	21	33	10	20	33	7
Race and Hispanic origin[b]						
White, non-Hispanic	25	41	8	21	33	7
Black, non-Hispanic	33	43	24	29	38	19
Hispanic	26	40	13	24	37	12

Table SD 2.2.A (Part 2)

Percentage of students in grades 9 through 12 in the United States who reported having carried a weapon[a] at least once within the past 30 days, by gender, grade, and race and Hispanic origin[b]: 1991, 1993, 1995, and 1997

	1995			1997		
	Total	Male	Female	Total	Male	Female
Total	20	31	8	18	28	7
Grade						
9	23	34	9	23	33	11
10	21	32	9	17	27	6
11	20	32	8	18	29	6
12	16	26	6	15	23	5
Race and Hispanic origin[b]						
White, non-Hispanic	19	31	6	17	27	4
Black, non-Hispanic	22	30	16	22	29	15
Hispanic	25	37	13	23	35	10

[a] Students were asked whether they carried a weapon "such as a gun, knife, or club" on at least one of the 30 days preceding the survey.

[b] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Centers for Disease Control and Prevention. "1990-1991 Youth Risk Behavior Surveillance System (YRBSS)." In *Chronic Disease and Health Promotion Reporting from the MMWR*, Table 2, p. 68; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 4, p. 23; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 4, p. 32; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 4, p. 38.

Table SD 2.2.B

Percentage of students in grades 9 through 12 in the United States who reported having carried a gun at least once within the past 30 days, by gender, grade, and race and Hispanic origin[a]: 1993, 1995, and 1997

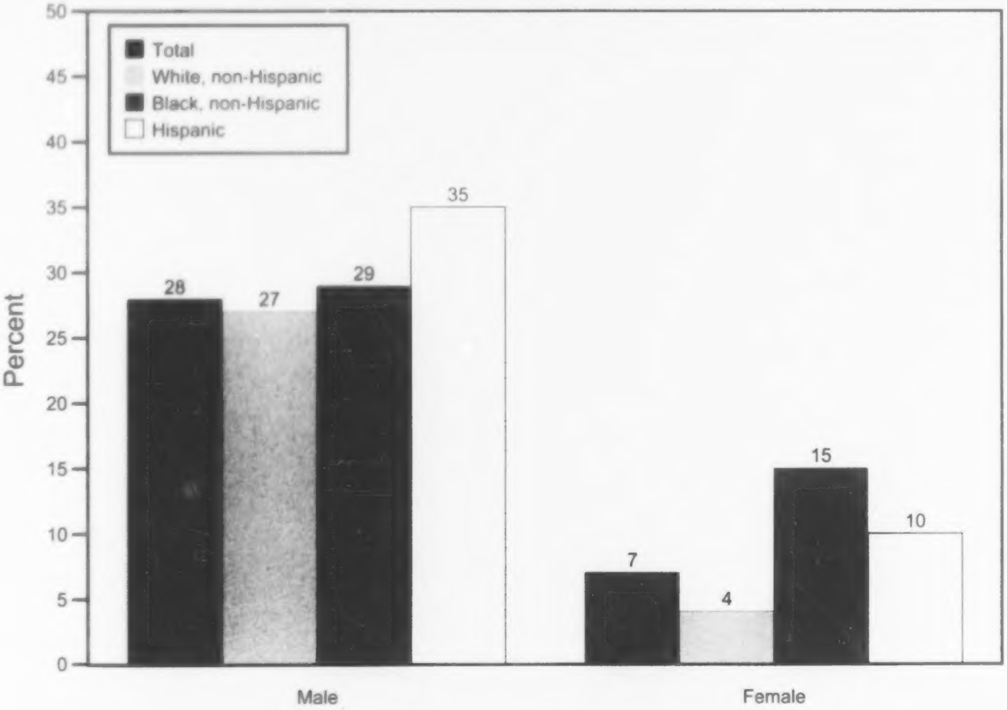
	1993			1995			1997		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	8	14	2	8	12	3	6	10	2
Grade									
9	9	16	2	9	14	3	8	13	3
10	9	15	2	8	13	3	6	10	1
11	7	13	1	7	12	1	6	9	1
12	7	12	1	6	11	2	5	8	1
Race and Hispanic origin[a]									
White, non-Hispanic	7	12	1	6	10	2	4	7	1
Black, non-Hispanic	12	21	4	11	19	4	9	16	3
Hispanic	10	17	3	11	17	5	10	17	2

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 4, p. 23; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 4, p. 32; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 4, p. 38.

Figure SD 2.2.A

Percentage of students in grades 9 through 12 in the United States who reported having carried a weapon[a] at least once within the past 30 days, by gender and by race and Hispanic origin[b]: 1997



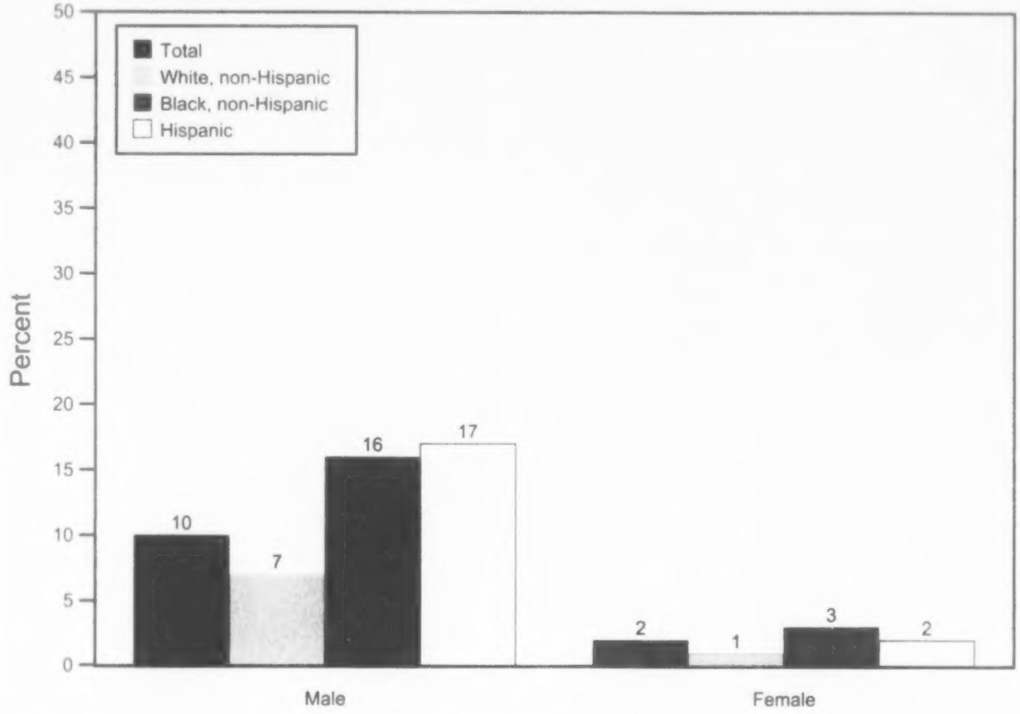
[a] Students were asked whether they carried a weapon "such as a gun, knife, or club" on at least one of the 30 days preceding the survey.

[b] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 4, p. 38.

Figure SD 2.2.B

Percentage of students in grades 9 through 12 in the United States who reported having carried a gun at least once within the past 30 days, by gender and by race and Hispanic origin[a]: 1997



[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 4, p. 38.

SD 2.3

SEAT BELT USE

Motor vehicle crashes are among the leading causes of death for children and youth.[21] Consistent use of seat belts and child safety seats dramatically lessens the risk of injury or death in a motor vehicle crash. The National Highway Traffic Safety Administration estimates that in 1997, 54 percent of all children under age 5 who were killed while occupants of a motor vehicle were not protected by seat belts or child safety seats.[22]

Table SD 2.3 presents data from the National Occupant Protection Use Survey (NOPUS), which gathers data through observation at intersections.[23] Between 1996 and 1998, seat belt use among toddlers ages 1 to 4 increased dramatically from 60 percent to 87 percent. Use among infants under one year old increased from 85 percent to 93 percent during the same time period. While these are promising trends, recent research indicates as many as 85 percent of parents and caregivers who do use car seats continue to install and use car seats incorrectly.[24]

Between 1996 and 1998 rates of seat belt use increased modestly for persons ages 5 to 15 and 16 to 24, from 65 to 69 percent and 50 to 55 percent, respectively.

Differences by Age. The use of seat belts or child safety seats is substantially higher at younger ages. In 1998, rates were 93 percent for infants, 87 percent for children ages 1 to 4, 69 percent for children ages 5 to 15, and 55 percent for ages 16 to 24 (see Figure SD 2.3).

Table SD 2.3

Percentage of children and youth in the United States who are observed to have worn a seat belt or been placed in a child safety seat, by age:[a] 1994, 1996, and 1998

	1994	1996	1998
Infants (under age 1)[b]	88	85	93
Toddlers (1-4 years)[c]	61	60	87
Youths (5-15 years)	58	65	69
Young adults (16-24 years)	53	50	55

[a] Age group is based on the best judgment of the observers in the National Occupant Protection Use Survey (NOPUS) Controlled Intersection Study.

[b] Use of restraints for infants refers to child safety seats.

[c] Use of restraints for toddlers refers to safety belts or child safety seats.

Source: 1998 estimates from "Transportation Secretary Slater Hails Increased Seat Belt Use," NHTSA 21-99, May 24, 1999. 1994 and 1996 estimates from "National Occupant Protection Use Survey—1996: Controlled Intersection Study." Research Note. National Highway Traffic Safety Administration, U.S. Department of Transportation, August 1997.

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[21] Hoyert, D.L., Kochanek, K.D., Murphy, S.L. "Deaths: Final Data for 1997." National Vital Statistics Reports: Volume 47, No. 19, Table 8. Hyattsville, MD: National Center for Health Statistics. 1999.

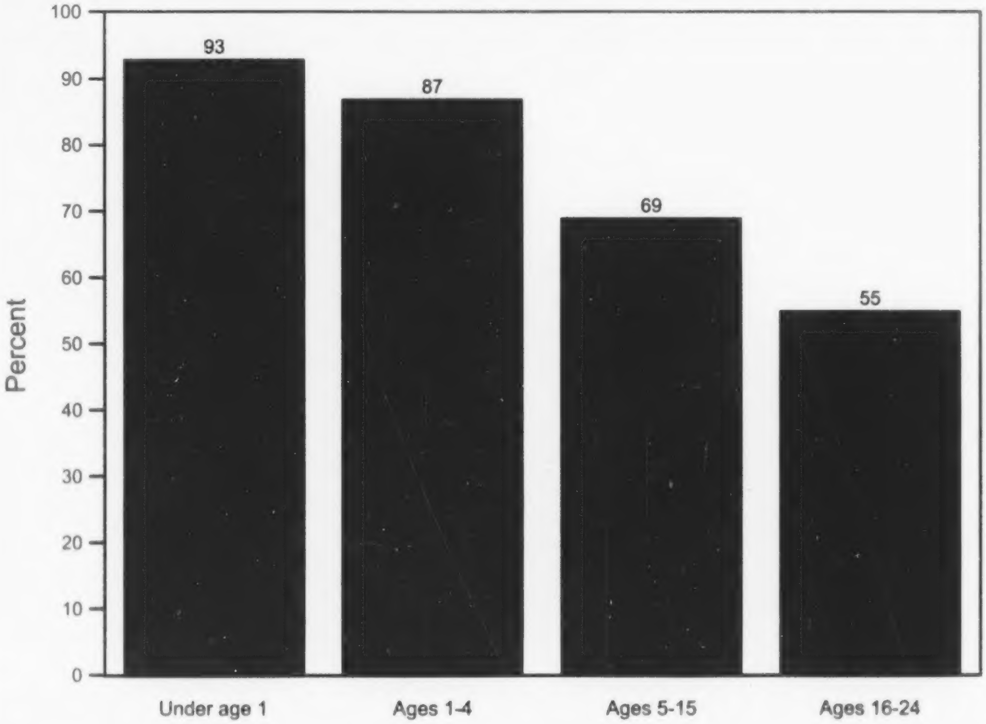
[22] National Highway Traffic Safety Administration. *Traffic Safety Facts 1997.* DOT HS 808 765. Washington, D.C.: U.S. Department of Transportation.

[23] Previous editions of *Trends in the Well-Being of America's Children and Youth* presented seat belt data based on parent report rather than observation. Estimates based on parent report are higher than those based on observation.

[24] The study identified several frequent misuses of rear-facing, forward-facing, and booster seats for observed children, including 63 percent in seats not held tightly by safety belts, 33 percent with loose harness straps, and 20 percent with harness straps incorrectly routed through the seats. National SAFE KIDS Campaign. 1999. *Child Passengers at Risk in America: A National Study of Car Seat Misuse.* Washington, D.C.: National SAFE KIDS Campaign. Summary results online at: *http://www.safekids.org/buckleup/study.html.*

Figure SD 2.3

Percentage of children and youth in the United States who are observed to have worn a seat belt or been placed in a child safety seat, by age:[a] 1998



[a] Age group is based on the best judgment of the observers in the National Occupant Protection Use Survey (NOPUS) Controlled Intersection Study.

Source: "Transportation Secretary Slater Hails Increased Seat Belt Use," NHTSA 21-99, May 24, 1999.

SD 2.4

REGULAR PHYSICAL EXERCISE

Sixty percent of Americans do not exercise regularly, according to a 1996 report by the Surgeon General, despite the many health benefits associated with physical activity.[25] People of all ages, both male and female, benefit from regular physical activity. Significant health benefits can be obtained by including a moderate amount of physical activity (e.g., 30 minutes of brisk walking or raking leaves, 15 minutes of running, or 45 minutes of playing volleyball) on most, if not all, days of the week.

The percentage of 12th-grade students who report actively participating in sports or exercise "almost every day" has remained fairly stable since 1976, varying between 44 and 48 percent. Rates have also been stable for 8th- and 10th-grade students since 1991, the first year in which data were collected for those grades (see Table SD 2.4.A).

Differences by Age. The percentages of students who report that they actively participate in sports or exercise "almost every day" decreased with age. In 1997, for example, 55 percent of 8th-graders, 52 percent of 10th-graders, and 45 percent of 12th-graders reported daily or almost daily exercise (see Figure SD 2.4). A similar pattern emerged in a survey that asked teens whether they had exercised vigorously three or more times in the past week (see Table SD 2.4.B).

Differences by Gender. Males consistently report exercising or participating in sports more often than females. In 1997, for each age group, male rates were 15 to 20 percentage points higher than female rates, a trend that exists for nearly every year that data are available (see Table SD 2.4.A).

Differences by Race. Black and white students in the 8th and 10th grades are about equally likely to exercise regularly (see Table SD 2.4.A). Among 12th-grade students, blacks appeared to be less likely than whites to exercise regularly during most years in the 1990s. Other survey data, reported in Table SD 2.4.B, show larger differences by race and Hispanic origin. In 1997, 67 percent of non-Hispanic white teens reported exercising vigorously at least three times a week, compared with 54 percent of non-Hispanic black teens and 60 percent of Hispanic teens.

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[25] U.S. Department of Health and Human Services. 1996. *Physical Activity and Health: A Report of the Surgeon General.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.

Table SD 2.4.A

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report that they actively participate in sports or exercise "almost every day," by gender and race: selected years, 1976-1997

	1976	1981	1986	1991	1992	1993	1994	1995	1996	1997
8th Grade										
Total	—	—	—	57	55	55	53	56	54	55
Gender										
Male	—	—	—	65	65	65	63	66	63	63
Female	—	—	—	49	45	46	44	47	47	48
Race										
White	—	—	—	58	56	58	56	59	57	58
Black	—	—	—	61	57	54	52	55	56	56
10th Grade										
Total	—	—	—	54	54	53	53	53	52	52
Gender										
Male	—	—	—	63	64	62	62	62	60	60
Female	—	—	—	45	45	45	44	45	44	45
Race										
White	—	—	—	55	55	54	54	55	53	54
Black	—	—	—	54	52	56	50	52	53	52
12th Grade										
Total	44	48	44	46	46	44	45	45	45	45
Gender										
Male	52	56	54	55	59	55	56	55	58	56
Female	36	39	36	36	33	33	36	37	32	36
Race										
White	43	47	46	48	48	46	49	46	48	46
Black	49	53	43	43	41	39	39	48	40	38

Sources: Bachman, J.G., Johnston, L.D., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1976, 1981, 1986, 1991, 1992, 1993, 1994, 1995, 1996, and 1997 (prepublication tables). Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. 8th and 10th grade 1991 Questionnaire Forms 1 and 2, item A04E; 1992-1996 Questionnaire Forms 1 and 2, item A03E; and 1997 Questionnaire Forms 1-6, item A03E. 12th grade 1976, 1981, 1986, and 1991-1997 Questionnaire Form 2, item A02H.

Table SD 2.4.B

Percentage of students in grades 9 through 12 in the United States who report having exercised vigorously three or more times in the past seven days, by gender, grade, and race and Hispanic origin[a]: 1993, 1995, and 1997

	1993			1995			1997		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	66	75	56	64	74	52	64	72	54
Grade									
9	75	81	68	72	80	62	73	79	66
10	70	77	61	69	79	59	66	74	56
11	63	71	53	60	72	47	60	69	49
12	58	70	45	55	67	42	58	68	44
Race and Hispanic origin[a]									
White, non-Hispanic	68	76	59	67	76	57	67	73	58
Black, non-Hispanic	60	71	49	53	68	41	54	67	41
Hispanic	59	69	50	57	70	45	60	69	50

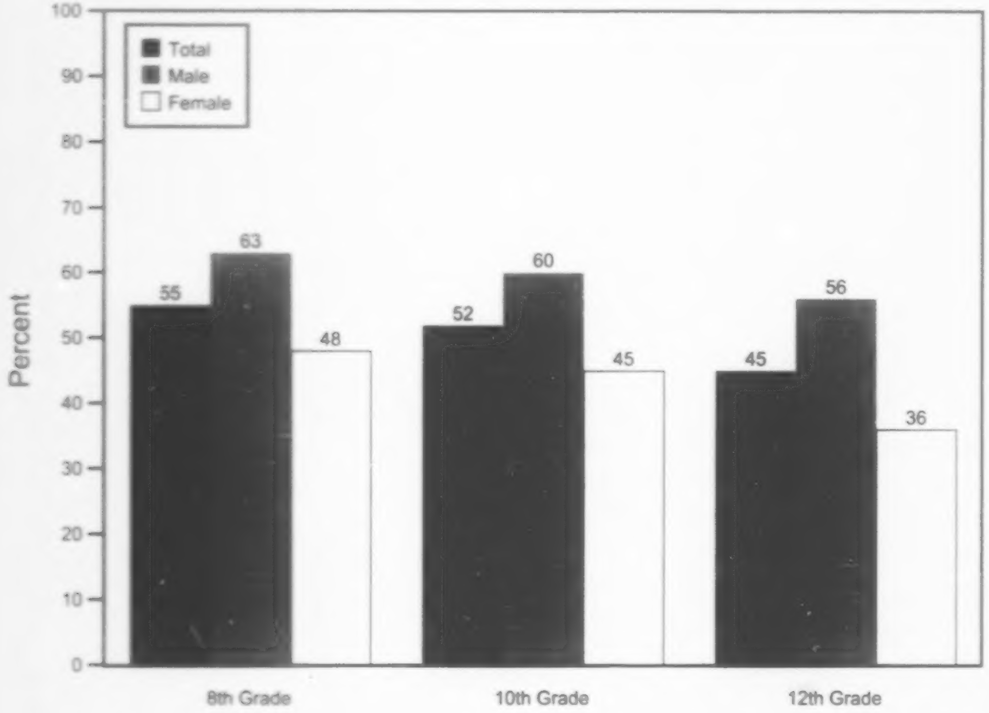
[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Note: Vigorous physical exercise is defined as activities that cause sweating and hard breathing for at least 20 minutes.

Sources: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 24, p. 53; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 36, p. 78; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998, *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 36, p. 84.

Figure SD 2.4

Percentage of 8th-, 10th-, and 12th-grade students who report that they actively participate in sports or exercise "almost every day," by gender: 1997



Source: Bachman, J.G., Johnston, L.D., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1997 (prepublication tables). Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. 8th and 10th grade Questionnaire Forms 1-6, item A03E. 12th grade Questionnaire Form 2, item A02H.

SD 2.5

SUFFICIENT HOURS OF SLEEP

Getting sufficient hours of sleep on a regular basis is important for optimum functioning throughout the day. Getting enough sleep is also linked to physical health. Individuals who are chronically sleep-deprived may be more susceptible to physical illness and more prone to accidents due to lack of concentration or inattention. Research indicates that sleep loss has a negative effect on motor performance, cognitive function, and mood.[26] For adolescents, not getting enough sleep may translate into lower performance in school or may affect socialization.

The number of hours that prove to be sufficient may differ between ages and individuals. A recent survey indicates that males ages 12 through 17 average 65.8 hours of sleep per week and females of the same age average 66.8 hours per week (approximately 9.5 hours of sleep a night for both sexes).[27] Analyses based on data from the 1995 National Longitudinal Study of Adolescent Health allow for an examination of youth perceptions of whether they obtain the sleep they need. In 1995, 74.1 percent of youth ages 12 through 17 reported that they got enough sleep (see Table SD 2.5).

Differences by Gender. Adolescent males are more likely to report getting enough sleep than their female peers. In 1995, 76.4 percent of males ages 12 through 17 reported getting enough sleep, compared with 71.8 percent of females.

Differences by Age and Grade. In 1995, approximately four out of every five (82.2 percent) youth ages 12 through 14 reported getting enough sleep, compared with 70.5 percent of youth ages 15 through 17. Similarly, in grades 7 and 8, 83.3 percent of students reported getting enough sleep, compared with 72.5 percent of students in grades 9 and 10 and 66.5 percent of students in grades 11 and 12.

Differences by Family Structure. Lower percentages of adolescents who live with a single father reported getting enough sleep (65.6 percent), compared with adolescents in other living arrangements (see Figure SD 2.5).

[26] Pilcher, J., and Huffcut, A. 1996. "Effects of Sleep Deprivation on Performance: A Meta-analysis." *Sleep* 19 (4): 318-326.

[27] Results from the Americans' Use of Time Project, University of Maryland, as reported in Robinson, J.P., and Bianchi, S. 1997. "The Children's Hours." *American Demographics* 12.

Table SD 2.5

Percentage of adolescents ages 12 through 17 in the United States who report that they get enough sleep, by gender, age, grade, race and Hispanic origin,[a] and family structure: 1995

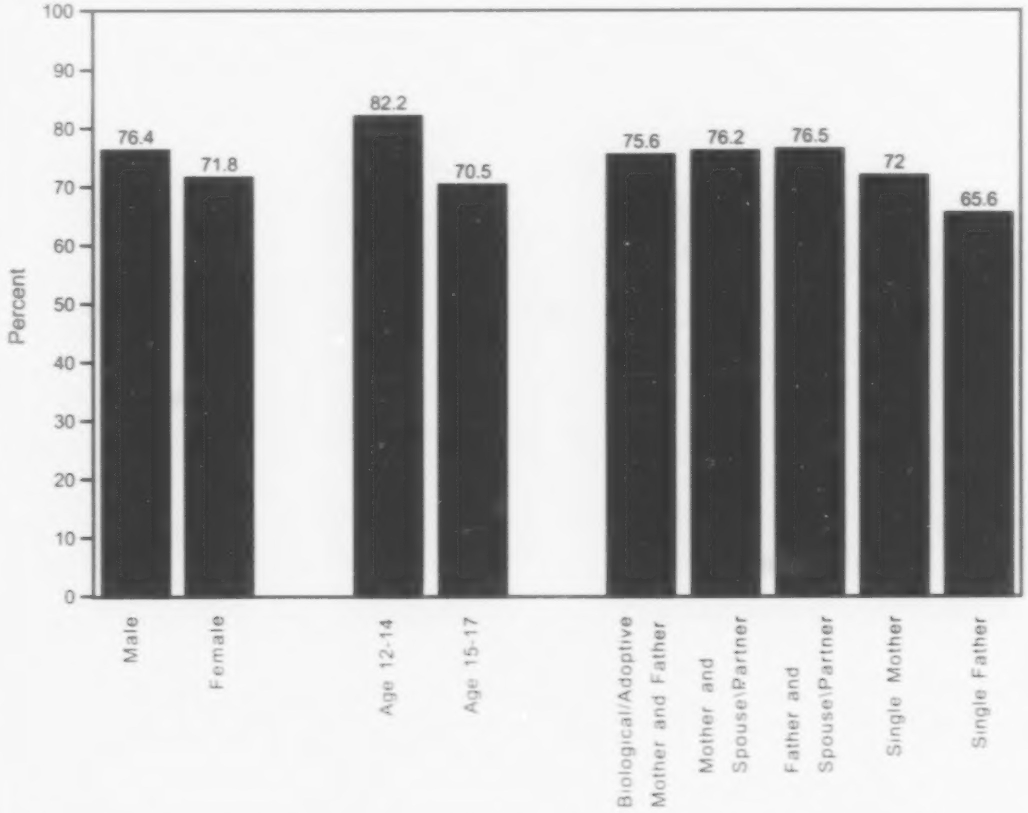
	1995
Total	74.1
Gender	
Male	76.4
Female	71.8
Age	
12-14	82.2
15-17	70.5
Grade	
7-8	83.3
9-10	72.5
11-12	66.5
Race and Hispanic Origin[a]	
White, non-Hispanic	75.3
Black, non-Hispanic	72.8
Hispanic	73.5
Family Structure	
Biological/Adoptive Mother and Father	75.6
Mother and Spouse/Partner	76.2
Father and Spouse/Partner	76.5
Single Mother	72.0
Single Father	65.6

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: The National Longitudinal Study of Adolescent Health (Add Health) Wave 1, 1995, tabulations by Child Trends.

Figure SD 2.5

Percentage of adolescents ages 12 through 17 in the United States who report that they get enough sleep, by gender, age, and family structure: 1995



Source: The National Longitudinal Study of Adolescent Health (Add Health) Wave 1, 1995, tabulations by Child Trends.

SD 3.1

CIGARETTE SMOKING AMONG YOUTH

Cigarette smoking is the single most preventable cause of death in the United States. The Centers for Disease Control and Prevention estimates that one in five deaths is caused by tobacco use.[28] Youthful smoking can have severe, lifelong consequences because a large proportion of those who initiate smoking in adolescence will continue to smoke as adults.[29] In addition, youth who smoke are also more likely to use illicit drugs and to drink more heavily than their nonsmoking peers.[30] Youth tobacco use varies within and among racial and ethnic minority groups, and it has been the focus of federal attention in recent years.[31]

There are an estimated 3 million underage smokers in the United States. In a 1990 study, it was estimated that each year underage smokers purchase 947 million packs of cigarettes and 26 million cans of smokeless tobacco, resulting in $1.26 billion in tobacco sales.[32] A 1992 study by the CDC concluded that more than half of underage smokers buy their own cigarettes.[33] Although studies also show that only 23 percent of smoking youth now use vending machines often or occasionally, anticipated changes in state enforcement of minors' access laws may increase the number of underage smokers who use tobacco vending machines.

Daily smoking among 12th-grade students decreased sharply in the late 1970s, and increased throughout most of the 1990s before declining modestly in 1998. Between 1992 and 1997, the percentage of 12th- graders who reported smoking daily increased from 17.2 percent to 24.6 percent. In 1998, however, the percentage of 12th-graders reporting daily smoking decreased to 22.4 (see Figure SD 3.1).

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[28] Centers for Disease Control and Prevention. 1993. "Cigarette Smoking—Attributable Mortality and Years of Potential Life Lost-United States, 1990." *Morbidity and Mortality Weekly Report* 42 (33): 645-649.

[29] The Monitoring the Future Study, The University of Michigan. "Cigarette Smoking Rates May Have Peaked among Younger Teens." Press release of December 18, 1997.

[30] Substance Abuse and Mental Health Services Administration. *Preliminary Estimates from the 1995 National Household Survey on Drug Abuse.* Rockville, Md.: Public Health Service, 1996. 1995 results indicate that youth ages 12 through 17 who smoked were about 8 times as likely to use illicit drugs and 11 times as likely to drink heavily as nonsmoking youths.

[31] Centers for Disease Control and Prevention. 1998. "Tobacco Use among U.S. Racial/Ethnic Minority Groups, African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, Hispanics: A Report of the Surgeon General (Executive Summary)." *Morbidity and Mortality Weekly Report* 47 (RR-18): 4.

[32] Difranza, J.R., and Tye, J.B. 1990. "Who Profits from Tobacco Sales to Children?" *Journal of the American Medical Association* 263 (20): 2784-2787.

[33] Allen, K., et al. 1993. "Teenage Tobacco Use: Data Estimates from the Teenage Attitudes and Practices Survey, United States, 1989." *Advance Data* 224: 1-20.

Data for 8th- and 10th-grade students, available from 1991 through 1998, also show increases throughout the 1990s in the percentage of students who reported smoking daily and a decrease in the last several years of the survey. Among 8th-grade students, the rate increased from 7.2 percent to 10.4 percent between 1991 and 1996 and decreased to 8.8 percent in 1998. Among 10th-grade students, the rate increased from 12.6 percent to 18.3 between 1991 and 1996 and decreased to 15.8 percent in 1998 (see Table SD 3.1.A).

Increases in the prevalence of current smoking among youth are also reflected in the results from the Youth Risk Behavior Surveillance Survey, which examines "current smoking", or smoking on one or more of the previous 30 days (see Table SD 3.1.B).

Differences by Age. In general, as age and/or grade increases, so does the prevalence of smoking. In 1998, the percentage of students who report daily smoking was 8.8 percent among 8th-graders, 15.8 percent among 10th-graders, and 22.4 percent among 12th-grade students (see Figure SD 3.1).

Differences by Race and Hispanic Origin.[34] White students consistently have the highest rates of smoking, while black students consistently have the lowest (see Tables SD 3.1.A and SD 3.1.B). The prevalence of current[35] smoking among white students is about twice that of black students. White students are twice as likely as Hispanic students and three times as likely as black students to be frequent[36] smokers (see Table SD 3.1.B).

Differences by Gender.[37] There is little to no difference in the prevalence of smoking between males and females, with the exception of black youth. Among black youth in grades 9 through 12, males were more likely than females in 1995 and in 1997 to report current and frequent smoking (see Table SD 3.1.B).

Prevalence of Smoking by Frequency. Two to three times the percentage of students report current smoking (smoking on 1 or more of the previous 30 days) than report frequent smoking (smoking on 20 or more of the previous 30 days) (see Table SD 3.1.B). This is apparent across all grades and for all the racial and ethnic groups shown.

[34] Estimates reported from the Youth Risk Behavior Surveillance System for whites and blacks exclude Hispanics of those races.

[35] Current smoking is smoking on 1 or more of the previous 30 days.

[36] Frequent smoking is smoking on 20 or more of the previous 30 days.

[37] The 1997 National Household Survey on Drug Abuse reports similar rates of cigarette smoking for males and females ages 12 through 17. 1997 responses to questions about use of cigarettes include: 39 percent of males and 38.3 percent of females "ever used," 25.7 percent of males and 27.2 percent of females "used in the past year," and 19 percent of males and 20.7 percent of females "used in the past month." Substance Abuse and Mental Health Services Administration, Office of Applied Studies. "National Household Survey on Drug Abuse: Population Estimates 1997," August 1998, Table 14A, accessed at http://www.samhsa.gov/oas/nhsda/pe1997/popes105.htm#E10E107 on 4/29/99.

Table SD 3.1.A (Part 1)

Percentage of 8th-, 10th-, and 12th-grade students who reported smoking cigarettes daily over the previous 30 days, by gender and by race and Hispanic origin[a]: selected years, 1975-1998

	1975	1980	1985	1990	1991	1992
8th Grade						
Total	—	—	—	—	7.2	7.0
Gender						
Male	—	—	—	—	8.1	6.9
Female	—	—	—	—	6.2	7.2
Race and Hispanic origin[a] (2-year average)[b]						
White	—	—	—	—	—	7.7
Black	—	—	—	—	—	1.4
Hispanic	—	—	—	—	—	7.3
10th Grade						
Total	—	—	—	—	12.6	12.3
Gender						
Male	—	—	—	—	12.4	12.1
Female	—	—	—	—	12.5	12.4
Race and Hispanic origin[a] (2-year average)[b]						
White	—	—	—	—	—	14.5
Black	—	—	—	—	—	2.8
Hispanic	—	—	—	—	—	8.4
12th Grade						
Total	26.9	21.3	19.5	19.1	18.5	17.2
Gender						
Male	26.9	18.5	17.8	18.6	18.8	17.2
Female	26.4	23.5	20.6	19.3	17.9	16.7
Race and Hispanic origin[a] (2-year average)[b]						
White	—	23.9	20.4	21.8	21.5	20.5
Black	—	17.4	9.9	5.8	5.1	4.2
Hispanic	--	12.8	11.8	10.9	11.5	12.5

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] Estimates for race and Hispanic origin represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Note: Data for 8th and 10th grades available since 1991.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. 8th and 10th grade Table D-31; 12th grade Table D-32. 1998 prepublication detail tables provided by Monitoring the Future Study staff: 8th and 10th grade Table D-35; 12th grade Table D-36.

Table SD 3.1.A (Part 2)

Percentage of 8th-, 10th-, and 12th-grade students who reported smoking cigarettes daily over the previous 30 days, by gender and by race and Hispanic origin[a]: selected years, 1975-1998

	1993	1994	1995	1996	1997	1998
8th Grade						
Total	8.3	8.8	9.3	10.4	9.0	8.8
Gender						
Male	8.8	9.5	9.2	10.5	9.0	8.1
Female	7.8	8.0	9.2	10.1	8.7	9.0
Race and Hispanic origin[a] (2-year average)[b]						
White	8.8	9.7	10.5	11.7	11.4	10.4
Black	1.8	2.6	2.8	3.2	3.7	3.8
Hispanic	7.2	9.0	9.2	8.0	8.1	8.4
10th Grade						
Total	14.2	14.6	16.3	18.3	18.0	15.8
Gender						
Male	13.8	15.2	16.3	18.1	17.2	14.7
Female	14.3	13.7	16.1	18.6	18.5	16.8
Race and Hispanic origin[a] (2-year average)[b]						
White	15.3	16.5	17.6	20.0	21.4	20.3
Black	3.1	3.8	4.7	5.1	5.6	5.8
Hispanic	8.9	8.1	9.9	11.6	10.8	9.4
12th Grade						
Total	19.0	19.4	21.6	22.2	24.6	22.4
Gender						
Male	19.4	20.4	21.7	22.2	24.8	22.7
Female	18.2	18.1	20.8	21.8	23.6	21.5
Race and Hispanic origin[a] (2-year average)[b]						
White	21.4	22.9	23.9	25.4	27.8	28.3
Black	4.1	4.9	6.1	7.0	7.2	7.4
Hispanic	11.8	10.6	11.6	12.9	14.0	13.6

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] Estimates for race and Hispanic origin represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Note: Data for 8th and 10th grades available since 1991.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. 8th and 10th grade Table D-31; 12th grade Table D-32. 1998 prepublication detail tables provided by Monitoring the Future Study staff: 8th and 10th grade Table D-35; 12th grade Table D-36.

Table SD 3.1.B

Percentage of students in grades 9 through 12 in the United States who reported current and frequent smoking, by gender, race and Hispanic origin[c], and grade: 1991, 1993, 1995, and 1997

	Current Smoking[a]				Frequent Smoking[b]			
	1991	1993	1995	1997	1991	1993	1995	1997
Total	28	31	35	36	13	14	16	17
Male	28	30	35	38	13	14	16	18
Female	27	31	34	35	12	14	16	16
Race and Hispanic origin[c]								
White, non-Hispanic	31	34	38	40	15	16	20	20
Male	30	32	37	40	15	16	18	20
Female	32	35	40	40	16	16	21	20
Black, non-Hispanic	13	15	19	23	3	5	5	7
Male	14	16	28	28	5	5	9	10
Female	11	14	12	17	2	4	1	4
Hispanic	25	29	34	34	7	8	10	11
Male	28	30	35	36	8	9	11	13
Female	23	27	33	32	6	7	9	8
Grade								
9	23	28	31	33	8	9	10	13
10	25	28	33	35	11	13	13	15
11	32	31	36	37	16	15	19	19
12	30	35	38	40	16	18	21	19

[a] Current smoking is smoking on 1 or more of the previous 30 days.

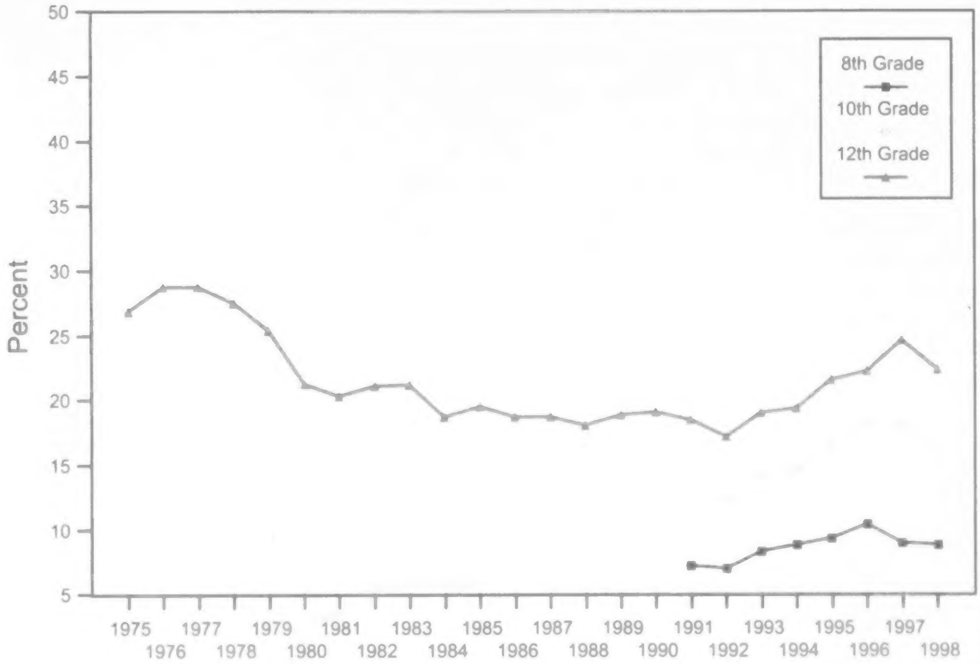
[b] Frequent smoking is smoking on 20 or more of the previous 30 days.

[c] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Centers for Disease Control and Prevention. "1990-1991 Youth Risk Behavior Surveillance System." In *Chronic Disease and Health Promotion Reporting from the MMWR,* Table 1, p. 60 (current smoking); Table 1, p. 50, and unpublished data results Q28 (frequent smoking); Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries,* March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 12, p. 35; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries,* September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 12, p. 44; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries,* August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 12, p. 50.

Figure SD 3.1

Percentage of 8th-, 10th-, and 12th-grade students in the United States who reported smoking cigarettes daily over the previous 30 days: selected years, 1975-1998



Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. 8th and 10th grade Table D-31; 12th grade Table D-32. 1998 prepublication detail tables provided by Monitoring the Future Study staff: 8th and 10th grade Table D-35; 12th grade Table D-36.

SD 3.2

SMOKELESS TOBACCO USE AMONG YOUTH

The use of smokeless tobacco—snuff and chewing tobacco—is associated with a substantially higher risk of developing oral cancer.[38] Data from the Monitoring the Future Study indicate that smokeless tobacco use among youth has generally decreased in recent years. Data from the Youth Risk Behavior Surveillance Survey provide additional information about smokeless tobacco use by males and females within racial and Hispanic groups.

Differences by Age. In general, as age and/or grade increases, so does the prevalence of smokeless tobacco use. In 1998, the percentage of students who report using smokeless tobacco over the previous 30 days was 4.8 percent among 8th-graders, 7.5 percent among 10th-graders, and 8.8 percent among 12th-grade students (see Table SD 3.2.A). The rate for 12th-grade students decreased from 12.2 percent in 1995 to 8.8 percent in 1998.

Differences by Gender. While rates of youth cigarette smoking are similar among males and females (see section SD 3.1), males students in the 8th, 10th, and 12th grades are significantly more likely to use smokeless tobacco than are female students (see Figure 3.2.A). In 1998, among 12th-grade students, 15.6 percent of males and 1.5 percent of females report smokeless tobacco use (see Table 3.2.A).

Differences by Race and Grade.[39] The use of smokeless tobacco is most prevalent among white youth. In 1998, 11.8 percent of white 12th-graders reported having used smokeless tobacco one or more times in the 30 days preceding the survey, compared with 4.3 percent of Hispanic 12th-graders and 1.4 percent of black 12th-graders (see Table SD 3.2.A). The rate of smokeless tobacco use increases for white students as grade level increases. In 1998 among white students, the prevalence of smokeless tobacco use was 6.1 percent among 8th-graders, 10 percent among 10th-graders, and 11.8 percent among 12th-graders (see Table 3.2.A).

The Youth Risk Behavior Surveillance Survey provides additional sub-group information for 9th- through 12th-grade students combined. According to this survey's most recent administration in 1997, the use of smokeless tobacco is most prevalent among white, non-Hispanic male high school students, with one-fifth reporting having used smokeless tobacco one or more times in the 30 days preceding the survey, compared with 8 percent of Hispanic male youth and 3 percent of black male youth (see Figure SD 3.2.B).

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[38] U.S. Department of Health and Human Services, Centers for Disease Control. 1999. *Targeting Tobacco Use: The Nation's Leading Cause of Death: At-a-Glance.* Atlanta, GA. Centers for Disease Control. See also Tomar, S.L., and Henningfield, J.E. 1995. "Additional Evidence Implicating Moist Snuff as a Potent Carcinogen." *Journal of the National Cancer Institute* 87 (24): 1822-1823.

[39] In Table SD 3.2.B and Figure SD 3.2.B, estimates for whites and blacks exclude Hispanics of those races.

Table SD 3.2.A

Percentage of 8th-, 10th-, and 12th-grade students in the United States who reported using smokeless tobacco over the previous 30 days, by grade, gender, and race and Hispanic origin[a]: selected years, 1986-1998

	1986	1989	1992	1993	1994	1995	1996	1997	1998
8th Grade									
Total	—	—	7.0	6.6	7.7	7.1	7.1	5.5	4.8
Gender									
Male	—	—	12.5	10.9	12.8	11.8	11.4	9.9	8.1
Female	—	—	2.0	2.7	2.4	2.9	2.9	1.5	1.5
Race and Hispanic origin[a] (2-year average)[b]									
White	—	—	8.3	8.0	8.1	8.9	8.8	7.6	6.1
Black	—	—	1.8	2.7	3.2	2.6	2.2	2.6	2.3
Hispanic	—	—	4.2	4.0	5.0	5.7	5.2	4.6	4.5
10th Grade									
Total	—	—	9.6	10.4	10.5	9.7	8.6	8.9	7.5
Gender									
Male	—	—	18.1	19.3	19.2	17.2	15.0	14.9	13.8
Female	—	—	1.8	2.0	2.1	2.1	2.3	2.7	1.7
Race and Hispanic origin[a] (2-year average)[b]									
White	—	—	11.4	12.0	12.5	12.0	11.0	10.4	10.0
Black	—	—	2.9	2.3	2.3	2.5	2.5	2.8	2.3
Hispanic	—	—	6.2	6.1	4.3	3.6	4.0	4.6	4.8
12th Grade									
Total	11.5	8.4	11.4	10.7	11.1	12.2	9.8	9.7	8.8
Gender									
Male	22.3	15.9	20.8	19.7	20.3	23.6	19.5	18.7	15.6
Female	1.6	1.2	2.0	2.3	2.6	1.8	1.1	1.2	1.5
Race and Hispanic origin[a] (2-year average)[b]									
White	—	10.6	—	13.8	13.8	13.8	13.0	12.2	11.8
Black	—	4.5	—	2.0	1.9	2.1	2.7	2.2	1.4
Hispanic	—	5.1	—	6.0	5.4	7.6	8.1	5.3	4.3

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] Estimates for race and Hispanic origin represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Note: Prevalence of smokeless tobacco was not asked of 12th-graders in 1990 and 1991. Prior to 1990, the prevalence question on smokeless tobacco was located near the end of one 12th-grade questionnaire form, whereas after 1991, the question was placed in a different and earlier form in the questionnaire. This shift could explain the discontinuities between the corresponding data in later years. Data for 8th and 10th grades available since 1991.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. 8th and 10th grade Table D-33; 12th grade Table D-34. Data for 1998: prepublication detail tables provided by Monitoring the Future Study staff: 8th and 10th grade Table D-37; 12th grade Table D-38.

Table SD 3.2.B (Part 1)

Percentage of youth in grades 9 through 12 in the United States who reported having used smokeless tobacco during the previous 30 days,[a] by gender and by race and Hispanic origin:[b] 1991, 1993, 1995, and 1997

	1991			1993		
	Total	Male	Female	Total	Male	Female
Total	11	19	1	12	20	2
Race and Hispanic origin[b]						
White, non-Hispanic	13	24	1	15	26	2
Black, non-Hispanic	2	4	1	3	5	1
Hispanic	6	11	1	5	8	2

[a] In 1991 and 1993, students were asked whether they had "used chewing tobacco or snuff during the 30 days preceding the survey; in 1995 and 1997, students where asked whether they had "used chewing tobacco or snuff on 1 or more of the 30 days preceding the survey."

[b] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Centers for Disease Control and Prevention. "1990-1991 Youth Risk Behavior Surveillance System." In *Chronic Disease and Health Promotion Reporting from the MMWR*, Table 1, p. 50; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 12, p. 35; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 12, p. 44; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 12, p. 50.

Table SD 3.2.B (Part 2)

Percentage of youth in grades 9 through 12 in the United States who reported having used smokeless tobacco during the previous 30 days,[a] by gender and by race and Hispanic origin:[b] 1991, 1993, 1995, and 1997

	1995			1997		
	Total	Male	Female	Total	Male	Female
Total	11	20	2	9	16	2
Race and Hispanic origin[b]						
White, non-Hispanic	15	25	3	12	21	2
Black, non-Hispanic	2	4	1	2	3	1
Hispanic	4	6	3	5	8	1

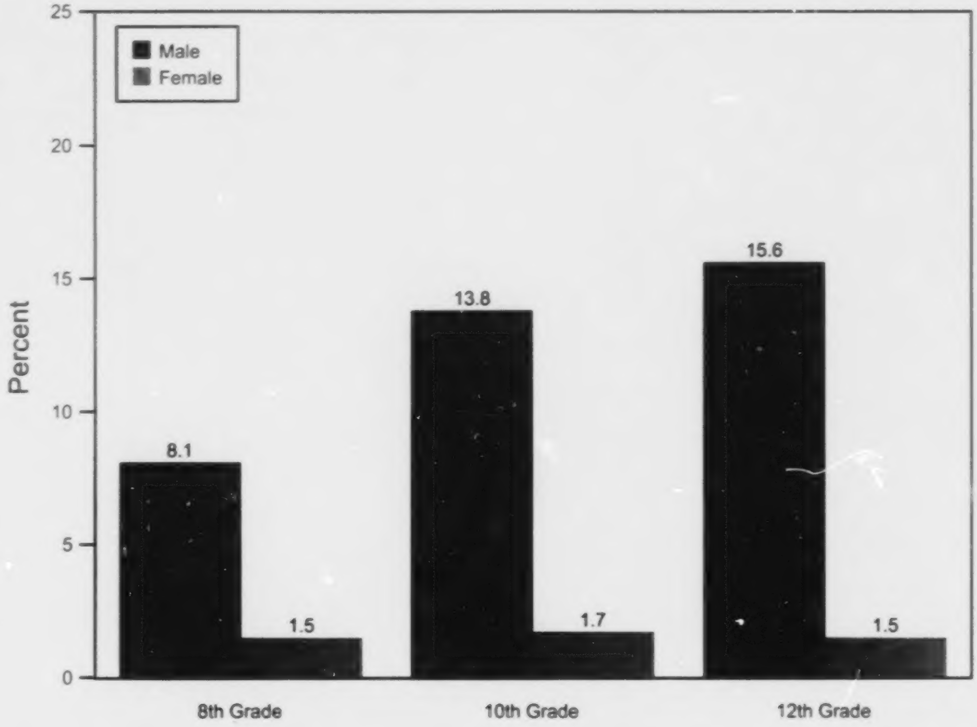
[a] In 1991 and 1993, students were asked whether they had "used chewing tobacco or snuff during the 30 days preceding the survey; in 1995 and 1997, students where asked whether they had "used chewing tobacco or snuff on 1 or more of the 30 days preceding the survey."

[b] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Centers for Disease Control and Prevention. "1990-1991 Youth Risk Behavior Surveillance System." In *Chronic Disease and Health Promotion Reporting from the MMWR,* Table 1, p. 50; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS (Youth Risk Behavior Surveillance System) Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries,* March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 12, p. 35; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries,* September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 12, p. 44; Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries,* August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 12, p. 50.

Figure SD 3.2.A

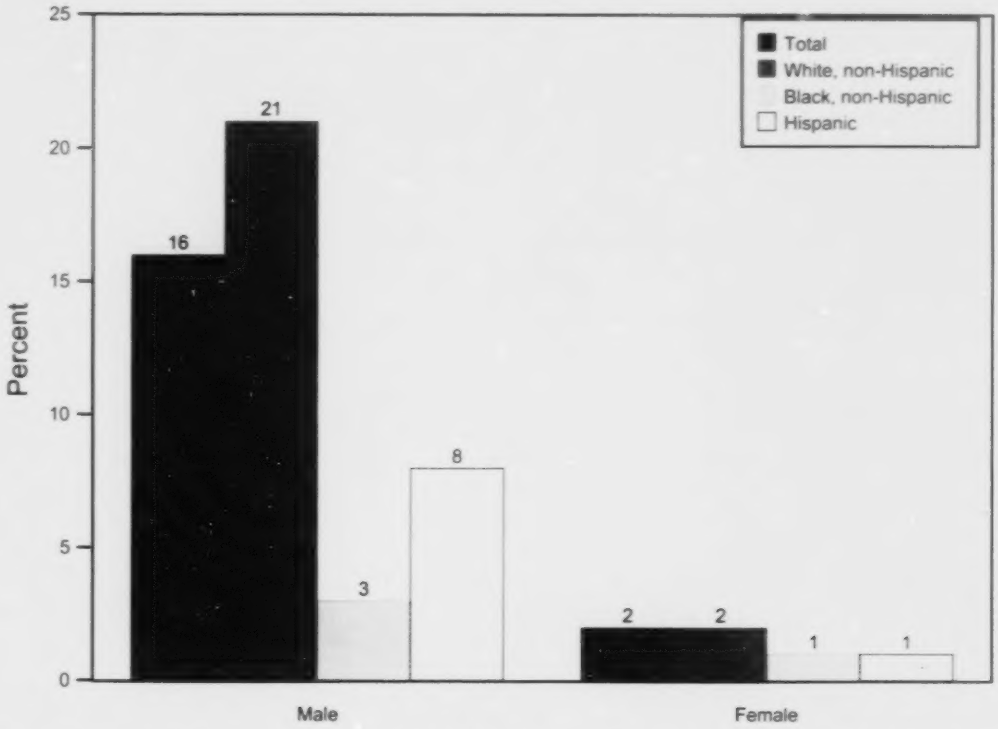
Percentage of 8th-, 10th-, and 12th-grade students in the United States who reported using smokeless tobacco during the previous 30 days, by gender: 1998



Source: The Monitoring the Future Study, The University of Michigan. Prepublication detail tables provided by the Monitoring the Future Study staff: 8th and 10th grade Table D-37; 12th grade Table D-38.

Figure SD 3.2.B

Percentage of youth in grades 9 through 12 in the United States who reported having used smokeless tobacco during the previous 30 days,[a] by gender and by race and Hispanic origin:[b] 1997



[a] In 1991 and 1993, students were asked whether they had "used chewing tobacco or snuff during the 30 days preceding the survey; in 1995 and 1997, students where asked whether they had "used chewing tobacco or snuff on 1 or more of the 30 days preceding the survey."

[b] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J.A., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 12, p. 50.

SD 3.3

ALCOHOL USE AMONG YOUTH

Alcohol use among adolescents is linked to a host of problems, including motor vehicle crashes and deaths, difficulties in school and the workplace, fighting, and breaking the law.[40] A recent report released by the National Institute on Alcohol Abuse and Alcoholism finds that the younger the age of drinking onset, the greater the chance that an individual at some point in life will develop a clinically defined alcohol disorder.[41] In addition, binge drinking by youth having five or more drinks in a row at some point in the previous two weeks is associated with higher levels of illicit drug use.[42]

Among 12th-grade students, rates of binge drinking fell from a high of 41.4 percent in 1981 to 27.5 percent in 1993 (see Figure SD 3.3.A). Between 1993 and 1998, rates have edged up modestly to 31.5 percent.[43] "Regular drinking"—having an alcoholic beverage on more than two occasions in the previous 30 days—was reported by one-half of 12th-grade students in 1980 but dropped to under one-third in 1997 (see Table SD 3.3.B and Figure SD 3.3.B).

Differences by Age. Binge drinking increases as students move into the upper grade levels (see Figure SD 3.3.A). In 1998, 13.7 percent of 8th-grade students reported binge drinking, while more than twice this percentage (31.5 percent) reported binge drinking in the 12th grade. A larger increase in binge drinking appears to occur between the 8th and 10th grades than in the period between the 10th and 12th grades (see Table SD 3.3.A).

Differences by Gender. Male students report higher rates of binge drinking than do female students. The disparity in binge drinking rates between males and females is greater in the upper grades, with 39.2 percent of males and 24 percent of females in the 12th grade reporting binge drinking in 1998 (see Table SD 3.3.A). Similar disparities exist for "regular drinking" (see Table SD 3.3.B).

Differences by Race and Hispanic Origin. Hispanic youth in the 8th grade are more likely than their white and black peers to engage in binge drinking. By the 12th grade, however, white students report a higher prevalence of binge drinking than do either Hispanic or black students. Black students consistently report the lowest prevalence of binge drinking for all grades and across all years (see Table SD 3.3.A).

[40] Petraitis, J., and Flay, B.R. 1995. "Reviewing Theories of Adolescent Substance Use: Organizing Pieces in the Puzzle." *Psychological Bulletin* 117 (1): 67-86; Hawkins, J.D., Catalano, R.F., and Miller, J.Y. 1992. "Risk and Protective Factors for Alcohol and Other Drug Problems in Adolescence and Early Adulthood: Implications for Substance Abuse Prevention." *Psychological Bulletin* 112 (1): 64-105; National Institute on Drug Abuse. 1987. *National Trends in Drug Use and Related Factors among American High School Students and Young Adults, 1976-1986.* DHHS Pub. No. (ADM) 87-1535. Washington, D.C.: U.S. Department of Health and Human Services.

[41] Grant, B.R., and Dawson, D.A. "Age at Onset of Alcohol Use and Its Association with DSM-IV Alcohol Abuse and Dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey." *Journal of Substance Abuse* 9: 103-110. Also, National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism. "Age of Drinking Onset Predicts Future Alcohol Abuse and Dependence." Press release of January 14, 1998.

[42] Substance Abuse and Mental Health Services Administration. 1996. *Preliminary Estimates from the 1995 National Household Survey on Drug Abuse.* Rockville, Md.: Public Health Service. Results from 1995 indicate that among binge drinkers, 18 percent were illicit drug users. In this survey, binge drinking is defined as having five or more drinks on the same occasion at least once in the past month. See also: Gruber, E., Diciemente, R.J., Anderson, M.M., and Lodico, M. 1996. "Early Drinking Onset and Its Association with Alcohol Use and Problem Behavior in Late Adolescence." *Preventive Medicine* 25: 293-300.

[43] These percentages underestimate the rate of binge drinking among all youth, because school-age youth who are not in school are somewhat more likely to binge drink than those in school. (Based on unpublished analyses of the National Health Interview Survey 1992 by Child Trends, and unpublished prevalence rates of past-month alcohol use among youth ages 12 through 17 by school status, enrolled or not enrolled, from the 1994-95 National Household Surveys on Drug Abuse.)

SEE TABLE FOLLOWING PAGES

Table SD 3.3.A (Part 1)

Percentage of 8th-, 10th-, and 12th-grade students in the United States who reported binge drinking,[a] by gender and by race and Hispanic origin[b]: selected years, 1975-1998

	1975	1980	1985	1990	1991	1992
8th Grade						
Total	—	—	—	—	12.9	13.4
Gender						
Male	—	—	—	—	14.3	13.9
Female	—	—	—	—	11.4	12.8
Race and Hispanic origin[b] (2-year average)[c]						
White	—	—	—	—	—	12.7
Black	—	—	—	—	—	9.6
Hispanic	—	—	—	—	—	20.4
10th Grade						
Total	—	—	—	—	22.9	21.1
Gender						
Male	—	—	—	—	26.4	23.7
Female	—	—	—	—	19.5	18.6
Race and Hispanic origin[b] (2-year average)[c]						
White	—	—	—	—	—	23.2
Black	—	—	—	—	—	15.0
Hispanic	—	—	—	—	—	22.9
12th Grade						
Total	36.8	41.2	36.7	32.2	29.8	27.9
Gender						
Male	49.0	52.1	45.3	39.1	37.8	35.6
Female	26.4	30.5	28.2	24.4	21.2	20.3
Race and Hispanic origin[b] (2-year average)[c]						
White	—	44.3	41.5	36.6	34.6	32.1
Black	—	17.7	15.7	14.4	11.7	11.3
Hispanic	—	33.1	31.7	25.6	27.9	31.1

[a] Binge drinking means having five or more drinks in a row in the previous two weeks.

[b] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[c] Estimates for race and Hispanic origin represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Note: Data for 8th and 10th grades available since 1991.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. 8th and 10th grade Table D-27; 12th-grade Table D-28. Data for 1998: prepublication detail tables provided by Monitoring the Future Study staff: 8th and 10th grade Table D-31; 12th-grade Table D-32.

Table SD 3.3.A (Part 2)

Percentage of 8th-, 10th-, and 12th-grade students in the United States who reported binge drinking,[a] by gender and by race and Hispanic origin[b]: selected years, 1975-1998

	1993	1994	1995	1996	1997	1998
8th Grade						
Total	13.5	14.5	14.5	15.6	14.5	13.7
Gender						
Male	14.8	16.0	15.1	16.5	15.3	14.4
Female	12.3	13.0	13.9	14.5	13.5	12.7
Race and Hispanic origin[b] (2-year average)[c]						
White	12.6	12.9	13.9	15.1	15.1	14.1
Black	10.7	11.8	10.8	10.4	9.8	9.0
Hispanic	21.4	22.3	22.0	21.0	20.7	20.4
10th Grade						
Total	23.0	23.6	24.0	24.8	25.1	24.3
Gender						
Male	26.5	28.5	26.3	27.2	28.6	26.7
Female	19.3	18.7	21.5	22.3	21.7	22.2
Race and Hispanic origin[b] (2-year average)[c]						
White	23.0	24.5	25.4	26.2	26.9	27.0
Black	14.8	14.0	13.3	12.2	12.7	12.8
Hispanic	23.8	24.2	26.8	29.6	27.5	26.3
12th Grade						
Total	27.5	28.2	29.8	30.2	31.3	31.5
Gender						
Male	34.6	37.0	36.9	37.0	37.9	39.2
Female	20.7	20.2	23.0	23.5	24.4	24.0
Race and Hispanic origin[b] (2-year average)[c]						
White	31.3	31.5	32.3	33.4	35.1	36.4
Black	12.6	14.4	14.9	15.3	13.4	12.3
Hispanic	27.2	24.3	26.6	27.1	27.6	28.1

[a] Binge drinking means having five or more drinks in a row in the previous two weeks.

[b] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[c] Estimates for race and Hispanic origin represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Note: Data for 8th and 10th grades available since 1991.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. 8th and 10th grade Table D-27; 12th-grade Table D-28. Data for 1998: prepublication detail tables provided by Monitoring the Future Study staff: 8th and 10th grade Table D-31; 12th-grade Table D-32.

Table SD 3.3.B

Percentage of 8th-, 10th-, and 12th-grade students in the United States who reported regular drinking,[a] by gender: selected years, 1980-1997

	1980	1985	1990	1991	1992	1993[b]	1994	1995	1996	1997
8th Grade										
Total	—	—	—	9.1	9.8	10.1	11.1	10.5	11.6	9.8
Male	—	—	—	10.4	10.7	11.1	12.0	11.6	12.1	11.1
Female	—	—	—	7.5	9.0	9.4	10.1	9.4	11.0	8.4
10th Grade										
Total	—	—	—	20.3	19.0	20.5	19.9	19.7	20.3	20.2
Male	—	—	—	23.4	21.1	23.6	24.0	21.4	23.3	23.0
Female	—	—	—	17.4	16.7	17.4	15.8	17.8	17.4	17.4
12th Grade										
Total	49.9	42.0	34.3	32.1	29.6	28.2	29.0	30.7	30.6	31.6
Male	57.6	48.2	39.9	38.8	35.6	33.3	35.7	36.4	35.5	37.0
Female	42.6	36.1	28.1	24.8	23.6	23.1	22.7	25.1	25.3	25.9

[a] Regular drinking means having an alcoholic beverage on more than two occasions in the previous 30 days.

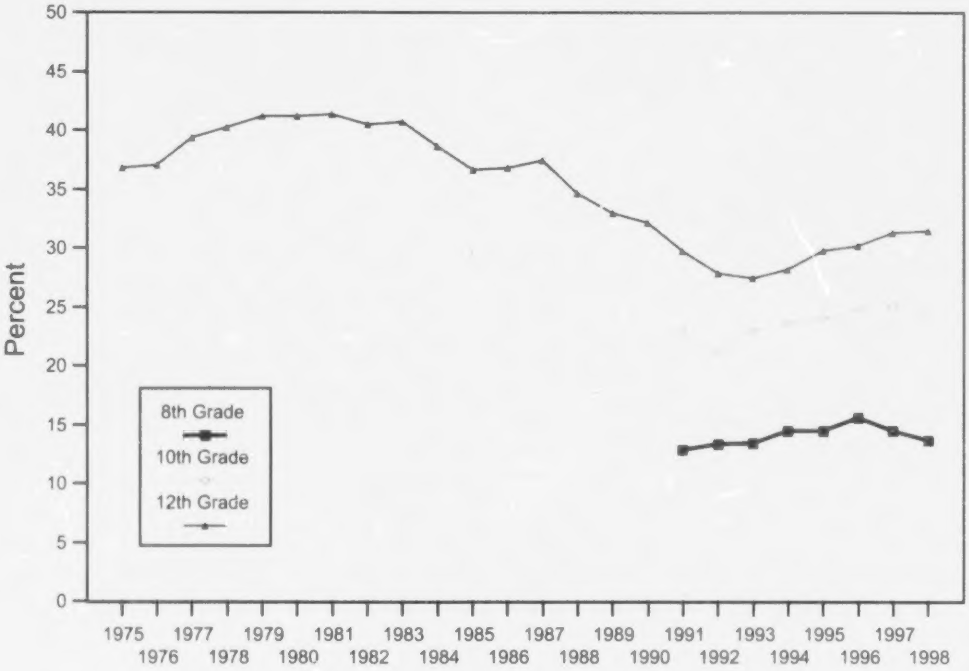
[b] Data from 1993 for 8th-, 10th-, and 12-grade students based on a smaller sample size than in other years.

Notes: Data for 8th and 10th grades available since 1991. Also, data for 1994 and later years reflect a slight change in the question text that includes clarification that a drink means "more than just a few sips." For this reason, percentages for all grades for 1994 and later years are not directly comparable to previous years.

Sources: Bachman, J.G., Johnston, L.D., and O'Malley, P.M. *"Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors, Descriptive Results."* 8th and 10th grade 1991-1996 Questionnaire Forms 1 and 2, item B05C; 12th grade 1980-1988 Questionnaire Forms 1-5, item B04B, and 1989-1997 Questionnaire Forms 1-6, item B04C.

Figure SD 3.3.A

Percentage of 8th-, 10th-, and 12th-grade students who reported binge drinking:[a] selected years, 1975-1998

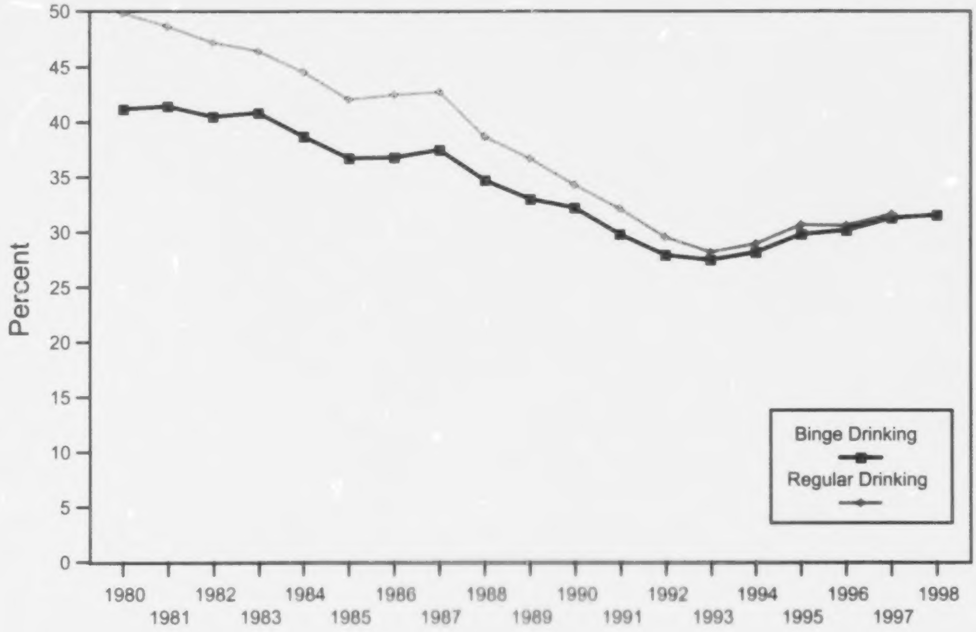


[a]Binge drinking means having five or more drinks in a row in the previous two weeks.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. 8th and 10th grade Table D-27; 12th grade Table D-28. Data for 1998: prepublication detail tables provided by Monitoring the Future Study staff: 8th and 10th grade Table D-31; 12th grade Table D-32.

Figure SD 3.3.B

Percentage of 12th-grade students in the United States who reported binge drinking[a] and who report regular drinking:[b] 1980-1998



[a] Binge drinking means having five or more drinks in a row in the previous two weeks.

[b] Regular drinking means having an alcoholic beverage on more than two occasions in the previous 30 days.

Sources: Binge drinking: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan, 8th and 10th grade Table D-27; 12th grade Table D-28. Data for 1998: prepublication detail tables provided by Monitoring the Future Study staff: 8th and 10th grade Table D-31; 12th grade Table D-32. Regular drinking: Bachman, J.G., Johnston, L.D., and O'Malley, P.M. *"Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors, Descriptive Results."* 8th and 10th grade 1991-1996 Questionnaire Forms 1 and 2, item B05C; 12th grade 1980-1988 Questionnaire Forms 1-5, item B04B, and 1989-1997 Questionnaire Forms 1-6, item B04C.

SD 3.4

EXPOSURE TO DRUNK DRIVING

Motor vehicle crashes are a major cause of death in the United States for youth ages 15 through 19.[44] Among young Americans of driving age, the issue of alcohol-impaired driving has particular significance. In all states, the purchase of alcohol by persons under age 21 is illegal; however, in 1994, 29 percent of the 2,610 traffic fatalities involving persons ages 15 through 17 were alcohol-related. For traffic deaths involving persons ages 18 through 20, the percentage of alcohol involvement was 44 percent.[45]

In 1997, 40 percent of adolescents in grades 9 through 12 reported that within the month prior to the survey, they had either driven after drinking alcohol or had ridden with a driver who had been drinking alcohol (see Table SD 3.4). Since 1991, about two in five high school students have reported this level of exposure to drunk driving.

Differences by Age. Rates of exposure to drunk driving differed modestly by age. In 1997, 45 percent of 12th-grade students reported taking this risk, compared with 35 percent of 9th-grade students (see Figure SD 3.4).

Differences by Gender. In 1997, 42 percent of males and 37 percent of females reported driving after drinking alcohol or riding with someone who had been drinking (see Table SD 3.4).

Differences by Race and Hispanic Origin.[46] In 1997, 47 percent of Hispanic, 40 percent of white, and 36 percent of black teens reported having been exposed to drunk driving within the past month (see Table SD 3.4).

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[44] Injury-related mortality (including motor vehicle crashes, fires and burns, drowning, suffocation, and accidents caused by firearms and other explosive materials, among others) accounted for 80 percent of all deaths of youth ages 15 through 19 in 1995. However, the rate of motor vehicle crash deaths among youth has been relatively constant since 1992 and has declined as a fraction of all violent deaths to teens. Preliminary data for 1996 show that motor vehicle crashes claimed 28.9 lives per 100,000 youth ages 15 through 19, compared with 43.6 per 100,000 youth in 1970. Data for 1996 are preliminary based on 85 percent of all reported deaths in 1996.

[45] "Update: Alcohol-Related Traffic Crashes and Fatalities among Youth and Young Adults—United States, 1982-1994." *Morbidity and Mortality Weekly Report* 44: 869-874.

[46] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Table SD 3.4

Percentage of students in grades 9 through 12 in the United States who reported driving after drinking alcohol, or riding with a driver who had been drinking alcohol, within the past 30 days, by gender, grade, and race and Hispanic origin[a]: 1991, 1993, 1995, and 1997

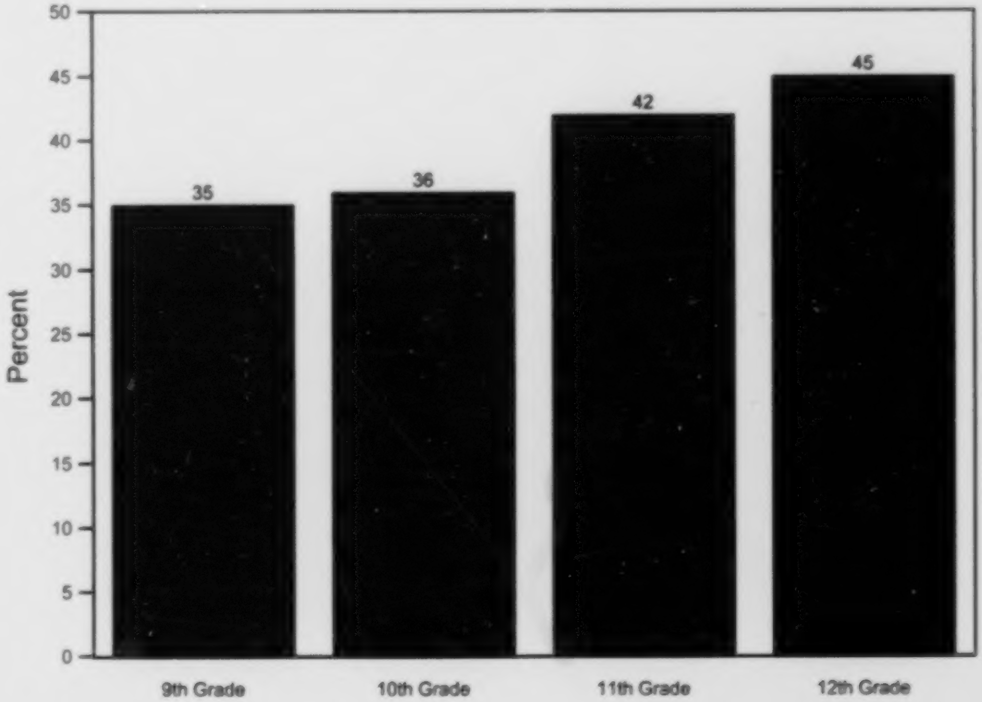
	1991	1993	1995	1997
Total	42	38	42	40
Gender				
Male	44	40	43	42
Female	41	36	40	37
Grade				
9	36	32	39	35
10	39	37	40	36
11	45	39	41	42
12	49	44	46	45
Race and Hispanic origin[a]				
White, non-Hispanic	43	37	41	40
Black, non-Hispanic	38	41	39	36
Hispanic	49	45	52	47

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Youth Risk Behavior Surveillance System survey results, 1991, 1993, 1995, and 1997. Unpublished tabulations by Laura Kann, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services.

Figure SD 3.4

Percentage of students in grades 9 through 12 in the United States who reported driving after drinking alcohol or riding with a driver who had been drinking alcohol within the past 30 days, by grade: 1997



Source: Youth Risk Behavior Surveillance System survey results, 1997. Unpublished tabulations by Laura Kann, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services.

SD 3.5

DRUG USE AMONG YOUTH: MARIJUANA, INHALANTS, HALLUCINOGENS, AND COCAINE

Drug use by youth has serious and often long-term individual, social, and economic consequences. Drug use contributes to crime, decreases economic productivity, and requires a disproportionate share of health care services for those affected. Use of drugs is a preventable behavior that, when established during adolescence, can extend into adulthood.[47]

The effects of drug use on individual health and well-being have been well documented: for example, the use of cocaine has been linked with numerous health problems ranging from eating disorders to disability and even death from heart attack and stroke.[48] Marijuana use holds both health and cognitive risks, particularly for damage to pulmonary functions as a result of chronic use.[49] Hallucinogens can affect brain chemistry and result in problems both in learning new information and retaining knowledge.[50] And chronic use of some inhalants may result in injury to the liver and kidneys as well as cause neurological damage, although it is not yet determined whether such damage is long-term.[51]

Marijuana Use.[52] From a high of 37.1 percent in 1978, large and steady declines in the percentage of 12th-graders reporting marijuana use were evident through 1992. Since 1992, however, marijuana use among 12th-grade students has increased from 11.9 percent to 22.8 percent in 1998 (see Figure SD 3.5.A). The rise in marijuana use is also evident among 8th-grade students, increasing from 3.2 percent in 1991 to 9.7 percent in 1998. Marijuana use by 10th-graders rose from 8.7 percent in 1991 to 18.7 percent in 1998.

Tenth- and 12th-graders have consistently been more likely to use marijuana than inhalants, hallucinogens, or cocaine. As of 1994, marijuana use among 8th-grade students had surpassed prevalence rates of other drugs shown (see Table SD 3.5.A). This increase in the use of marijuana corresponds with a decline in its perceived harmfulness by students across all grade levels from 1991 to 1998.[53]

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[47] Johnson, R.A., Hoffmann, J.P., and Gerstein, D.R. July 1996. *The Relationship between Family Structure and Adolescent Substance Use.* Rockville, Md.: Substance Abuse and Mental Health Services Administration, Office of Applied Studies, July 1996.

[48] Blanken, A.J. 1993. "Measuring Use of Alcohol and Other Drugs among Adolescents." *Public Health Reports* (Journal of the U.S. Public Health Service) 108 (Supp. 1).

[49] See, for example, "Marijuana: Facts Parents Need to Know," National Institute on Drug Abuse, U.S. Department of Health and Human Services, NCADI Pub. No. PHD712, 1995; and Pope, Harrison G., Jr., and Deborah Yurgelun-Todd, "The Residual Cognitive Effects of Heavy Marijuana Use in College Students," *Journal of the American Medical Association* 275 (7), Feb. 21, 1996.

[50] "Measuring the Health Behavior of Adolescents: The Youth Risk Behavior Surveillance System and Recent Reports on High-Risk Adolescents." 1993. *Public Health Reports* 108 (Supp. 1). Rockville, Md.: Public Health Service.

[51] Ibid.

[52] These percentages likely underestimate the rate of drug use among all youth, because school-age youth who are not in school are somewhat more likely to use drugs than those in school. (Based on unpublished prevalence rates of past-month marijuana use, past-year cocaine use, and past-year inhalant use among youth ages 12 to 17, by school status, enrolled or not enrolled, from the 1994-95 National Household Surveys on Drug Abuse.)

[53] The data on perceived harmfulness of specified drugs are not shown here but can also be obtained from the Monitoring the Future Study. The percentage of students who think that smoking marijuana occasionally or regularly is physically or otherwise harmful has dropped from 1991 to 1998 across all grade levels. In 1998, 24.4 percent of 12th-grade students perceived smoking marijuana occasionally to be harmful (down from 40.6 percent in 1991), and 58.5 percent perceived smoking marijuana regularly to be harmful (down from 78.6 percent in 1991).

Use of Other Specified Drugs. Increases have also been shown in the use of cocaine and hallucinogens since 1991 across all grade levels. In recent years, cocaine use has been least prevalent among the four drugs types examined in this section among all grade levels, with a high of 2.4 percent of 12th-grade students reporting use within a 30-day period in 1998 (see Figure SD 3.5.B). Hallucinogens have low prevalence rates among 8th-graders in 1998 (1.4 percent), although use increases with grade, eventually surpassing the use of inhalants for the upper grade levels. The use of inhalants is highest among 8th-grade students at 4.8 percent in 1998 (see Table SD 3.5.A).

One-quarter (25.6 percent) of America's 12th-graders report use of "any illicit drug" in the past 30 days in 1998, with 21.5 percent of 10th-graders and 12.1 percent of 8th-graders reporting similar recent use (see Table SD 3.5.C).

Differences by Age. As seen with cigarette and alcohol use (see Sections SD 3.1 and SD 3.3), use of both marijuana and hallucinogens increases with grade level. This increase is relatively small for hallucinogen use but is substantial for marijuana use. In 1998, 9.7 percent of 8th-grade students reported using marijuana in the past 30 days (see Table SD 3.5.A). More than twice that percentage of 12th-graders (22.8 percent) reported using marijuana within the past 30 days in the same year. In contrast, inhalant use is more prevalent in the 8th grade than in either the 10th or the 12th grade. The rate of inhalant use among 8th-graders was 4.8 percent, compared with 2.9 percent for 10th-graders and 2.3 percent for high school seniors in 1998. The prevalence of cocaine use is lowest among 8th-graders in 1998 (1.4 percent), but similarly small rates are reflected in other grades as well (2.1 percent for 10th grade and 2.4 percent for 12th grade) (see Table SD 3.5.A).

Differences by Gender. Male high school students appear somewhat more likely than females to report use of marijuana, inhalants, hallucinogens, and cocaine. The largest gender difference is seen in marijuana use and is most apparent in the upper grade levels. Among 8th-grade students, 10.3 percent of males and 8.8 percent of females reported marijuana use within the preceding 30 days of the survey in 1998. In the 10th grade in that year, males reported marijuana use at about 3 percentage points higher than that of females (20.3 versus 17.2). This gender gap increases to about 8 percentage points among high school seniors in 1998 (26.5 versus 18.8) (see Table SD 3.5.A).

Differences by Race. For each category of drug use shown, as well as for use of any illicit drugs, black students consistently report the lowest rates of use across all grades (see Tables SD 3.5.B and SD 3.5.C).

Table SD 3.5.A (Part 1)

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report having used specified drugs within the previous 30 days, by grade and gender: selected years, 1975-1998

	1975	1980	1985	1990	1991	1992
Marijuana/Hashish						
8th grade	—	—	—	—	3.2	3.7
Male	—	—	—	—	3.8	3.8
Female	—	—	—	—	2.6	3.5
10th grade	—	—	—	—	8.7	8.1
Male	—	—	—	—	10.1	9.0
Female	—	—	—	—	7.3	7.1
12th grade	27.1	33.7	25.7	14.0	13.8	11.9
Male	32.3	37.8	28.7	16.1	16.1	13.4
Female	22.5	29.1	22.4	11.5	11.2	10.2
Inhalants[a]						
8th grade	—	—	—	—	4.4	4.7
Male	—	—	—	—	4.0	4.4
Female	—	—	—	—	4.7	4.9
10th grade	—	—	—	—	2.7	2.7
Male	—	—	—	—	2.9	2.9
Female	—	—	—	—	2.6	2.6
12th grade	—	1.4	2.2	2.7	2.4	2.3
Male	—	1.8	2.8	3.5	3.3	3.0
Female	—	1.0	1.7	2.0	1.6	1.6
Hallucinogens[b]						
8th grade	—	—	—	—	0.8	1.1
Male	—	—	—	—	0.9	1.1
Female	—	—	—	—	0.7	1.0
10th grade	—	—	—	—	1.6	1.8
Male	—	—	—	—	1.8	2.1
Female	—	—	—	—	1.4	1.4
12th grade	4.7	3.7	2.5	2.2	2.2	2.1
Male	6.0	4.8	3.4	3.2	3.1	2.9
Female	3.6	2.5	1.4	1.0	1.1	1.4
Cocaine						
8th grade	—	—	—	—	0.5	0.7
Male	—	—	—	—	0.7	0.6
Female	—	—	—	—	0.4	0.8
10th grade	—	—	—	—	0.7	0.7
Male	—	—	—	—	0.7	0.8
Female	—	—	—	—	0.6	0.6
12th grade	1.9	5.2	6.7	1.9	1.4	1.3
Male	2.5	6.0	7.7	2.3	1.7	1.5
Female	1.2	4.3	5.6	1.3	0.9	0.9

[a] All data are unadjusted for underreporting of nitrites. Data for 12th grade only, based on five of six questionnaire forms, with sample size five-sixths of total sample size.

[b] All data are unadjusted for underreporting of PCP.

Note: Data for 8th and 10th grades available since 1991.

Sources: Published and unpublished results from the Monitoring the Future Study, The University of Michigan. Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. Table 4-7, pre-publication Table 4-7 for 1998, and prior years of this publication. Additional historical data tables provided by Monitoring the Future Study staff.

Table SD 3.5.A (Part 2)

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report having used specified drugs within the previous 30 days, by grade and gender: selected years, 1975-1998

	1993	1994	1995	1996	1997	1998
Marijuana/Hashish						
8th grade	5.1	7.8	9.1	11.3	10.2	9.7
Male	6.1	9.5	9.8	12.1	11.4	10.3
Female	4.1	6.0	8.2	10.2	8.9	8.8
10th grade	10.9	15.8	17.2	20.4	20.5	18.7
Male	13.1	18.6	19.1	22.3	23.0	20.3
Female	8.6	12.8	15.0	18.6	17.9	17.2
12th grade	15.5	19.0	21.2	21.9	23.7	22.8
Male	18.2	23.0	24.6	25.1	26.4	26.5
Female	12.5	15.1	17.2	18.3	20.3	18.8
Inhalants[a]						
8th grade	5.4	5.6	6.1	5.8	5.6	4.8
Male	4.9	5.4	5.6	4.8	5.1	4.8
Female	6.0	5.8	6.6	6.6	5.8	4.7
10th grade	3.3	3.6	3.5	3.3	3.0	2.9
Male	3.7	3.9	3.8	3.4	3.0	3.2
Female	2.9	3.3	3.2	3.2	2.9	2.6
12th grade	2.5	2.7	3.2	2.5	2.5	2.3
Male	3.2	3.6	3.9	3.1	3.3	2.9
Female	1.7	1.9	2.5	2.0	1.8	1.7
Hallucinogens[b]						
8th grade	1.2	1.3	1.7	1.9	1.8	1.4
Male	1.3	1.5	1.8	2.0	2.2	1.7
Female	1.1	1.0	1.5	1.6	1.3	1.1
10th grade	1.9	2.4	3.3	2.8	3.3	3.2
Male	2.5	3.0	3.9	3.3	4.0	3.5
Female	1.3	1.7	2.7	2.3	2.5	2.9
12th grade	2.7	3.1	4.4	3.5	3.9	3.8
Male	3.6	4.3	5.8	4.7	5.1	5.1
Female	1.7	1.7	2.7	2.3	2.7	2.3
Cocaine						
8th grade	0.7	1.0	1.2	1.3	1.1	1.4
Male	0.9	1.2	1.1	1.2	1.2	1.5
Female	0.6	0.9	1.2	1.4	1.0	1.2
10th grade	0.9	1.2	1.7	1.7	2.0	2.1
Male	1.2	1.4	1.8	1.8	1.9	2.4
Female	0.5	0.9	1.5	1.6	1.8	1.8
12th grade	1.3	1.5	1.8	2.0	2.3	2.4
Male	1.7	1.9	2.2	2.6	2.8	3.0
Female	0.9	1.1	1.3	1.4	1.6	1.7

[a] All data are unadjusted for underreporting of nitrites. Data for 12th grade only, based on five of six questionnaire forms, with sample size five-sixths of total sample size.

[b] All data are unadjusted for underreporting of PCP.

Note: Data for 8th and 10th grades available since 1991.

Sources: Published and unpublished results from the Monitoring the Future Study, The University of Michigan. Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. Table 4-7, pre-publication Table 4-7 for 1998, and prior years of this publication. Additional historical data tables provided by Monitoring the Future Study staff.

Table SD 3.5.B (Part 1)

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report having used specified drugs within the previous 30 days, by race and Hispanic origin[a]: 1992-1998

	8th Grade						
	1992	1993	1994	1995	1996	1997	1998
Marijuana/Hashish[a]							
White	3.3	4.1	5.6	7.8	10.0	10.6	9.5
Black	2.0	2.9	5.0	6.6	8.0	9.0	9.1
Hispanic	6.4	8.3	12.1	12.9	12.5	13.1	13.5
Inhalants[a,b]							
White	4.7	5.4	6.0	6.6	6.8	6.5	5.9
Black	2.4	2.7	2.8	2.5	2.0	1.9	2.2
Hispanic	5.5	5.6	6.1	6.5	6.4	5.5	5.2
Hallucinogens[a,c]							
White	0.8	1.1	1.3	1.6	2.0	2.0	1.5
Black	0.4	0.4	0.4	0.4	0.5	0.4	0.4
Hispanic	1.9	1.9	1.8	1.9	2.2	2.3	2.5
Cocaine[a]							
White	0.5	0.5	0.7	0.9	1.2	1.2	1.0
Black	0.4	0.4	0.3	0.4	0.4	0.3	0.4
Hispanic	1.7	1.8	2.2	2.5	2.3	2.1	2.5

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] Inhalants include substances such as glues and aerosols. Data for 12th-grade students based on five of six forms. Data are unadjusted for known underreporting of nitrates.

[c] Hallucinogens include substances such as LSD. Data are unadjusted for known underreporting of PCP.

Note: Estimates represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. Table 4-9. Also, prior years of this publication (Table 10 for 1992-1995, Table 4-9 thereafter). Prepublication Table 4-9 for 1998 provided by Monitoring the Future Study staff.

Table SD 3.5.B (Part 2)

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report having used specified drugs within the previous 30 days, by race and Hispanic origin[a]: 1992-1998

	10th Grade						
	1992	1993	1994	1995	1996	1997	1998
Marijuana/Hashish[a]							
White	9.0	9.8	13.4	16.8	19.3	21.2	20.3
Black	3.6	4.9	9.8	13.8	15.9	16.5	15.3
Hispanic	10.4	12.4	15.6	17.7	19.1	21.3	21.4
Inhalants[a,b]							
White	2.9	3.2	3.7	3.9	3.9	3.5	3.3
Black	2.0	2.0	1.6	1.3	1.2	1.2	1.1
Hispanic	3.0	3.0	3.4	3.4	2.9	2.9	2.9
Hallucinogens[a,c]							
White	2.0	2.1	2.3	3.1	3.5	3.4	3.5
Black	0.2	0.3	0.7	0.8	0.5	0.6	0.7
Hispanic	1.4	1.8	2.2	2.7	3.1	3.3	3.8
Cocaine[a]							
White	0.7	0.8	0.9	1.4	1.6	1.7	1.9
Black	0.1	0.2	0.6	0.6	0.4	0.4	0.6
Hispanic	1.1	1.2	1.8	2.4	2.9	3.6	3.9

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] Inhalants include substances such as glues and aerosols. Data for 12th-grade students based on five of six forms. Data are unadjusted for known underreporting of nitrates.

[c] Hallucinogens include substances such as LSD. Data are unadjusted for known underreporting of PCP.

Note: Estimates represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. Table 4-9. Also, prior years of this publication (Table 10 for 1992-1995, Table 4-9 thereafter). Prepublication Table 4-9 for 1998 provided by Monitoring the Future Study staff.

Table SD 3.5.B (Part 3)

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report having used specified drugs within the previous 30 days, by race and Hispanic origin[a]: 1992-1998

	12th Grade						
	1992	1993	1994	1995	1996	1997	1998
Marijuana/Hashish[a]							
White	14.1	14.9	18.4	20.8	22.0	23.6	24.4
Black	6.1	8.1	13.1	16.8	18.3	18.5	18.3
Hispanic	12.7	12.5	14.9	17.9	19.1	21.2	21.6
Inhalants[a,b]							
White	2.4	2.6	2.8	3.3	3.3	3.0	2.8
Black	1.5	1.4	1.5	1.4	1.0	0.9	0.9
Hispanic	2.5	2.1	2.3	2.3	2.1	1.7	1.8
Hallucinogens[a,c]							
White	2.5	2.9	3.3	4.1	4.4	4.3	4.5
Black	0.3	0.5	0.8	0.7	0.6	0.9	0.7
Hispanic	1.5	1.7	2.0	3.4	4.0	2.9	2.8
Cocaine[a]							
White	1.3	1.2	1.3	1.6	1.9	2.2	2.5
Black	0.7	0.4	0.5	0.5	0.4	0.5	0.6
Hispanic	1.9	2.4	2.3	2.3	3.2	3.3	2.7

[a] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

[b] Inhalants include substances such as glues and aerosols. Data for 12th-grade students based on five of six forms. Data are unadjusted for known underreporting of nitrates.

[c] Hallucinogens include substances such as LSD. Data are unadjusted for known underreporting of PCP.

Note: Estimates represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Sources: Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. Table 4-9. Also, prior years of this publication (Table 10 for 1992-1995, Table 4-9 thereafter). Prepublication Table 4-9 for 1998 provided by Monitoring the Future Study staff.

Table SD 3.5.C

Percentage of 8th-, 10th-, and 12th-grade students in the United States who report having used any illicit drugs[a] in the previous 30 days, and 12th-grade reports of illicit drug use by gender and by race and Hispanic origin[b]: selected years, 1985-1998

	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998
Grade										
8	—	—	5.7	6.8	8.4	10.9	12.4	14.6	12.9	12.1
10	—	—	11.6	11.0	14.0	18.5	20.2	23.2	23.0	21.5
12	29.7	17.2	16.4	14.4	18.3	21.9	23.8	24.6	26.2	25.6
12th Graders										
Gender										
Male	32.1	18.9	18.4	15.9	20.4	25.5	26.8	27.5	28.7	—
Female	26.7	15.2	14.1	12.7	15.9	18.3	20.4	21.2	23.2	—
Race and Hispanic origin[b] (2-year average)[c]										
White	30.2	20.5	18.6	16.8	17.8	21.4	23.8	24.8	26.4	27.5
Black	22.9	9.0	7.2	7.3	9.1	14.3	18.3	19.7	20.0	19.4
Hispanic	27.2	13.9	14.7	14.6	15.6	18.3	21.4	22.6	23.9	24.1

[a] For 12th-graders only: Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other opiates, stimulants, barbiturates, or tranquilizers not under a doctor's orders. For 8th-and 10th-graders only: The use of other opiates and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] Estimates for whites and blacks include Hispanics of those races. Persons of Hispanic origin may be of any race.

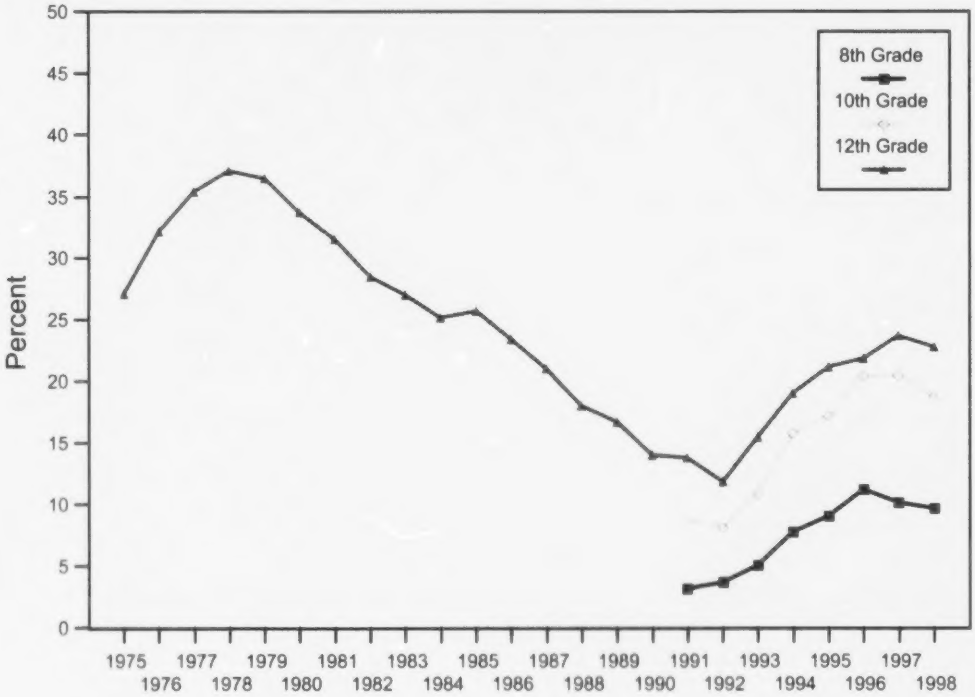
[c] Estimates for race and Hispanic origin represent the mean of the specified year and the previous year. Data have been combined to increase sub-group sample sizes, thus providing more stable estimates.

Note: Data for 8th and 10th grades available since 1991.

Sources: Published and unpublished results from the Monitoring the Future Study, The University of Michigan. Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. Table 2-1b. Also, prior years of this publication. Some data for 1998: The Monitoring the Future Study, The University of Michigan. "Drug Use among American Young People Begins to Turn Downward." Press release of December 18, 1998, Table 1b. Additional historical data tables provided by Monitoring the Future Study staff.

Figure SD 3.5.A

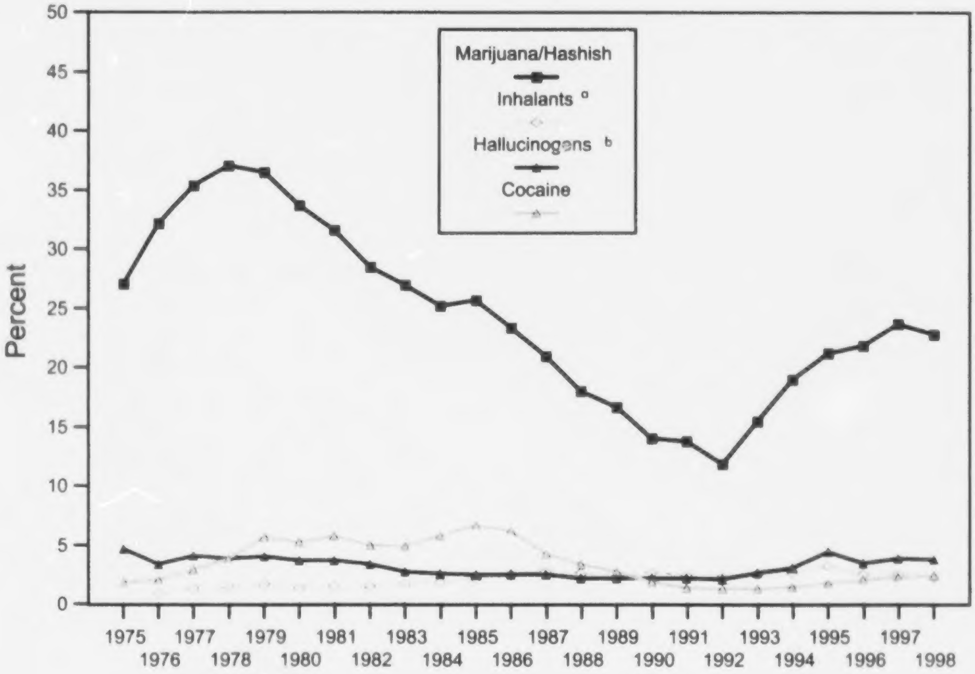
Percentage of 8th-, 10th-, and 12th-grade students in the United States who report having used marijuana within the previous 30 days: selected years, 1975-1998



Sources: Published and unpublished results from the Monitoring the Future Study, The University of Michigan. Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. Table 4-7; also, prior years of this publication. Additional historical data tables provided by Monitoring the Future Study staff.

Figure SD 3.5.B

Percentage of 12th-grade students in the United States who report having used specified drugs within the previous 30 days: 1975-1998



[a] All data on inhalants are unadjusted for underreporting of nitrites.

[b] All data on hallucinogens are unadjusted for underreporting of PCP.

Sources: Published and unpublished results from the Monitoring the Future Study, The University of Michigan. Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, Md.: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345, Institute for Social Research, The University of Michigan. Table 4-7. Also, prior years of this publication. Additional historical data tables provided by Monitoring the Future Study staff.

SD 3.6

PEER ATTITUDES TOWARD ALCOHOL, MARIJUANA, COCAINE, AND SMOKING

Drug use is correlated with attitudes and beliefs about drugs, both in terms of perceived health risks and the level of peer disapproval.[54] As children reach adolescence, peer influences on personal behavior can take on increasing importance in determining the use of drugs, alcohol, and cigarettes.

The majority of high school seniors have long reported peer disapproval of drug and alcohol use and cigarette smoking, as reflected in their responses to questions of the level of disapproval they would receive from their peers for (1) taking one to two drinks nearly every day, (2) smoking marijuana even occasionally (as opposed to trying it once), (3) taking cocaine even occasionally (as opposed to trying it once), and (4) smoking one or more packs of cigarettes per day (see Table SD 3.6).[55]

Among 12th-graders, peer disapproval of drinking (one to two drinks nearly every day) and smoking marijuana (even occasionally) reached highs of 78 and 79 percent, respectively, in 1992, before declining to 72 and 60 percent by 1997 (see Figure SD 3.6). Peer disapproval of smoking cigarettes (one or more packs per day) has declined since 1992, although disapproval levels had been relatively stable prior to that time. In 1997, 69 percent of 12th-graders reported peer disapproval of smoking a pack or more of cigarettes per day. Peer disapproval of cocaine use (even occasionally) increased from 87 percent in 1986 to 95 percent in 1991 and has remained at about this level. Cocaine use commands the highest level of peer disapproval for every year shown (see Table SD 3.6 and Figure SD 3.6).

Differences by Gender. Male high school seniors have consistently reported lower levels of peer disapproval of drinking than have their female peers. In 1997, 63 percent of males reported peer disapproval of drinking, compared with 79 percent of females. Male students also report somewhat lower peer disapproval of smoking cigarettes and marijuana.

Differences by Race. For 1997, rates of disapproval for drug use were generally similar for black and white 12th-graders for drinking and for cocaine use. Group differences are apparent for disapproval of marijuana use (67 percent disapproval among black compared with 58 percent among white students) and disapproval of smoking (83 percent disapproval among black compared with 64 percent among white students).

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[54] Substance Abuse and Mental Health Services Administration. 1996. *Preliminary Estimates from the 1995 National Household Survey on Drug Abuse.* Rockville, Md.: Public Health Service. Also see U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education. "Student Reports of Availability, Peer Approval, and Use of Alcohol, Marijuana, and Other Drugs at School: 1993." *Statistics in Brief,* June 1997.

[55] All references to drinking, marijuana and cocaine use, and smoking cigarettes throughout this text use the parameters for these activities as defined by the Monitoring the Future questionnaire.

Table SD 3.6

Percentage of 12th-grade students in the United States who report that peers would not approve of their using alcohol, marijuana, cocaine, or cigarettes: selected years, 1980-1997

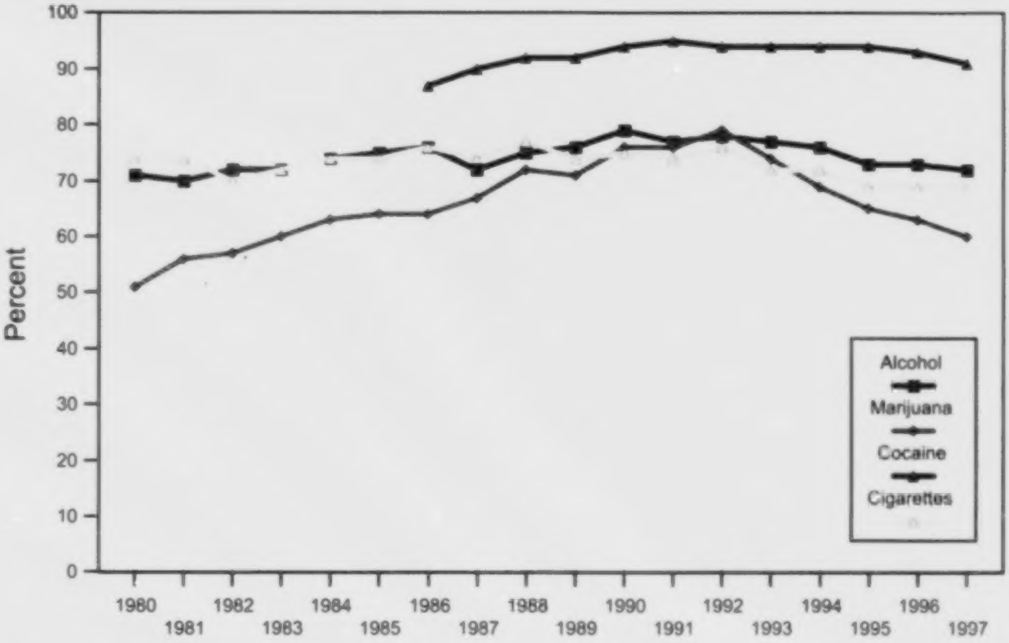
	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Disapprove of taking one to two drinks nearly every day										
Total	71	75	79	77	78	77	76	73	73	72
Gender										
Male	61	69	71	68	69	68	67	65	63	63
Female	79	81	87	85	85	85	83	80	83	79
Race										
White	70	75	77	77	77	76	76	72	71	71
Black	76	82	85	80	81	80	78	74	77	74
Disapprove of smoking marijuana even occasionally										
Total	51	64	76	76	79	74	69	65	63	60
Gender										
Male	49	64	73	73	78	72	63	62	59	57
Female	52	65	80	78	80	75	74	69	67	63
Race										
White	50	63	74	75	78	73	68	64	62	58
Black	59	72	89	86	84	76	70	69	66	67
Disapprove of taking cocaine even occasionally[a]										
Total	—	—	94	95	94	94	94	94	93	91
Gender										
Male	—	—	92	93	93	92	91	92	90	89
Female	—	—	96	96	96	96	96	95	96	93
Race										
White	—	—	95	96	96	95	94	95	93	91
Black	—	—	92	97	91	89	94	92	93	95
Disapprove of smoking one or more packs of cigarettes per day										
Total	74	74	75	74	76	72	72	69	69	69
Gender										
Male	73	72	73	72	76	68	67	65	65	65
Female	76	76	77	77	77	75	77	74	73	71
Race										
White	75	73	73	72	75	71	69	67	66	64
Black	74	81	87	88	82	80	83	81	82	83

[a] The question regarding cocaine use was not included prior to 1986.

Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1980, 1985, 1990, 1991, 1992, 1993, 1994, 1995, 1996, and 1997 (prepublication tables). Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Questionnaire Form 4. 1980-1985: items E08A, E08C, E08G. 1986-1987: items E08A, E08C, E08H, E08I. 1988-1997: items E07A, E07C, E07H, E07I. Data based on one of six questionnaire forms, with a resulting sample size one-sixth of the total sample size for each year.

Figure SD 3.6

Percentage of 12th-grade students in the United States who report that peers would not approve of their using alcohol, marijuana, cocaine, or cigarettes: 1980-1997



Note: Figure reports students' perceived peer nonapproval rates of use of various drugs: alcohol (taking one to two drinks nearly every day), marijuana (smoking even occasionally), cocaine (using even occasionally), and smoking (one or more packs of cigarettes every day).

Sources: Johnston, L.D., Bachman, J.G., and O'Malley, P.M. *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors.* 1980-1997 (1997 prepublication tables). Ann Arbor, Mich.: Institute for Social Research, The University of Michigan. Questionnaire Form 4. 1980-1985: items E08A, E08C, E08G. 1986-1987: items E08A, E08C, E08H, E08I. 1988-1997: items E07A, E07C, E07H, E07I. Data based on one of six questionnaire forms, with a resulting sample size one-sixth of the total sample size for each year.

SD 3.7

ABUSE OF ALCOHOL OR OTHER CONTROLLED SUBSTANCES

The use of alcohol and other illicit drugs by teens[56] has been related to numerous social problems, such as delinquency, fighting, and early sexual activity,[57] and to a variety of short- and long-term health problems.[58] For many reasons, then, it is important that youth stay free of all such substances.

In 1997, 14 percent of 12- through 17-year-olds reported binge drinking and/or any use of an illicit drug during the previous month (see Table SD 3.7).

Differences by Gender. Rates of reported use vary little by gender. In 1997, 16 percent of males and 13 percent of females ages 12 through 17 reported illicit drug use or binge drinking in the previous month.

Differences by Race and Hispanic Origin.[59] Rates of reported use differed little among whites, blacks, and Hispanics, ranging from 12 percent to 15 percent in 1997.

Table SD 3.7

Percentage of youth ages 12 through 17 in the United States reporting illicit drug[a] use and/or binge drinking[b] in the past month, by gender and by race and Hispanic origin: 1994-1997

	1994	1995	1996	1997
Total	13	15	13	14
Gender				
Male	14	17	14	16
Female	12	13	11	13
Race and Hispanic origin[c]				
White, non-Hispanic	15	16	13	15
Black, non-Hispanic	10	12	10	12
Hispanic	10	13	13	13
Other	4	14	8	13

[a] Illicit drugs include marijuana, cocaine (including crack), heroin, hallucinogens (including PCP), inhalants, and nonmedical use of psychotherapeutics.

[b] Binge drinking includes drinking five or more drinks on the same occasion on one or more days in the past 30 days.

[c] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies, Prevalence Branch. Unpublished analyses, National Household Survey on Drug Abuse.

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[56] A note on methodology. Throughout this report, we present data from two major federally sponsored surveys of adolescent substance use: the Monitoring the Future Study, a school-based survey, and the National Household Survey on Drug Abuse, a household survey of the population ages 12 and older. A recent report finds that rates of drug use obtained were larger in the school survey than in the household survey, possibly because of greater underreporting in the household setting than in the classroom and the different questionnaires used in the two surveys. Gfroerer, J., Wright, D., and Kopstein, A. 1997. "Prevalence of Youth Substance Use: The Impact of Methodological Differences between Two National Surveys." *Drug and Alcohol Dependence* 47: 19-30.

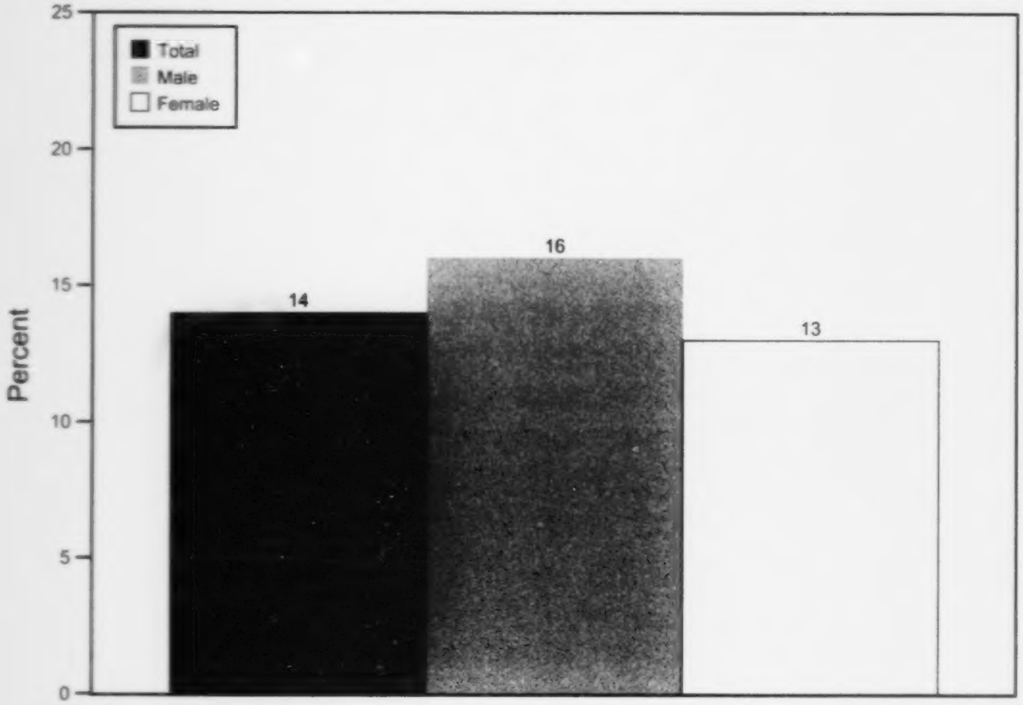
[57] National Institute on Drug Abuse. *National Trends in Drug Use and Related Factors among American High School Students and Young Adults, 1976-1986.* 1987. DHHS Pub. No. (ADM) 87-1535. Washington, D.C.: U.S. Department of Health and Human Services. See also: Grant, B.R., and Dawson, D.A. "Age at Onset of Alcohol Use and Its Association with DSM-IV Alcohol Abuse and Dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey." *Journal of Substance Abuse* 9: 103-110, which reports decreasing odds of alcohol dependence with each increasing year of age at onset of use, as well as decreasing odds of alcohol abuse.

[58] "Measuring the Health Behavior of Adolescents: The Youth Risk Behavior Surveillance System and Recent Reports on High Risk Adolescents." 1993. *Public Health Reports* 108 (Supp. 1). Rockville, Md.: Public Health Service.

[59] Estimates for whites and blacks exclude Hispanics of those races.

Figure SD 3.7

Percentage of youth ages 12 through 17 in the United States reporting illicit drug[a] use and/or binge drinking[b] in the past month, by gender: 1997



[a] Illicit drugs include marijuana, cocaine (including crack), heroin, hallucinogens (including PCP), inhalants, and nonmedical use of psychotherapeutics.

[b] Binge drinking includes drinking five or more drinks on the same occasion on one or more days in the past 30 days.

Source: Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies, Prevalence Branch. Unpublished analyses, National Household Survey on Drug Abuse.

SD 4.1

SEXUALLY EXPERIENCED TEENS

Sexual experience and, particularly, age at first intercourse represent critical indicators of the risk of pregnancy and sexually transmitted diseases. Youth who begin having sex at a younger age are exposed to these risks over a longer period of time. Because sexual intercourse during the teen years, especially first intercourse, is often unplanned,[60] it is also often unprotected by contraception.[61] In addition, research has shown that youth who have an early sexual experience are more likely at later ages to have more sexual partners and more frequent intercourse.[62]

Trends over the past several decades show that increasing proportions of teens are sexually experienced—defined as ever having had sexual intercourse. However, recent data show a decline between 1995 and 1997 in the percentage of teens who have ever had sexual intercourse (see Table SD 4.1.B).

Differences by Age. Age is the most important correlate of teen sexual experience. For the 1985 through 1987 cohort (cohorts are defined as those females who turned 20 in the specific time period presented), just under 1 in 10 13-year-old males and only 1 in 50 13-year-old females were sexually experienced by age 13. The proportion of teen females who were sexually experienced by age 15 increased from 3 percent for the 1958-1960 cohort to 11 percent for the 1990 to 1994 cohort. By age 20 for that same age cohort, 3 in 4 females were sexually experienced. And, for the 1985-1987 cohort, 4 in 5 males were sexually experienced by age 20 (see Table SD 4.1.A). By the late teen years, most teens are sexually experienced; however, it is important to note that not all teens are sexually experienced. Among the 1990-1994 cohort of females, 45 percent had not had intercourse by age 18. Among the 1985-1987 cohort of adolescent males, more than one-third had not had intercourse by age 18 (see Table SD 4.1.A). In addition, data from the Youth Risk Behavior Survey, a survey of 9th- through 12th-grade students show that, for 9th-grade students in 1997, 38 percent reported having had sexual intercourse. This percentage rises with each grade, reaching 61 percent by the 12th grade (see Table SD 4.1.B).[63]

Differences by Gender. More teen males than females reported having had intercourse by a given age. Data from the 1985-1987 cohort suggest that the proportion of teen males at each year of age who report having sex was roughly equal to the rate of sexually experienced teen females who are one year older (see Table SD 4.1.A).

Among female adolescents of all ages, the percentage who were sexually experienced has increased over time (see Table SD 4.1.A). For example, the percentage of 18-year-old females who were sexually experienced increased from 27 percent for the 1958-1960 cohort to 35 percent for the 1970-1972 cohort and to 52 percent for the 1985-1987 cohort. The proportion continued to increase to 55 percent for the 1990-1994 cohort. The percentage of male teens who were sexually experienced increased from 55 percent for the 1970-1972 cohort to 64 percent for the 1985-1987 cohort (see Table SD 4.1.A). Caution should be exercised in interpreting these differences, however, since the data for males and females come from different surveys.

[60] Lowenstein, G., and Furstenberg, F.F. 1991. "Is Teenage Sexual Behavior Rational?" *Journal of Applied Social Psychology* 21 (12): 957-986. Abma, J., Driscoll, A., Moore, K. 1998. "Young Women's Degree of Control over First Intercourse: An Exploratory Analysis." *Family Planning Perspectives* 30 (1): 12-18.

[61] Forrest, J.D., and Singh, S. 1990. "The Sexual and Reproductive Behavior of American Women, 1982-1988." *Family Planning Perspectives* 22 (5): 206-214.

[62] Koyle, P., Jensen, L., Olsen, J., and Cundick, B. 1989. "Comparison of Sexual Behaviors among Adolescents Having an Early, Middle, and Late First Intercourse Experience." *Youth and Society* 20 (4): 461-475.

[63] Direct comparison with other years is not possible, as grade in school does not accurately reflect age and data from the Youth Risk Behavior Surveillance Survey include only teens in school.

Data for students from the Youth Risk Behavior Survey indicate that in 1997, gender differences were nonexistent (see Table SD 4.1.B). Additional survey research indicates that the percentage of teen males who have ever had sex has declined since 1988, while the use of contraception among teen males increased (1995 National Survey of Adolescent Males).[64] The 1995 National Survey of Family Growth found that 50 percent of women 15 through 19 years of age had ever had intercourse, the first decline ever recorded by the periodic survey.[65]

Differences by Race.[66] Black students in grades 9 through 12 are more likely than white and Hispanic students to have had their first sexual experience while still in high school (see Table SD 4.1.B). Specifically, in 1997,

- 43 percent of male and 44 percent of female white students reported having had sexual intercourse,
- 58 percent of Hispanic male students and 46 percent of Hispanic female students reported having had sexual intercourse, and
- 80 percent of black male students and 66 percent of black female students reported having had sexual intercourse.

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[64] The Urban Institute. "New Data on Sexual Behaviors of Teenage Males." Fact Sheet, May 1, 1997. Washington, D.C.: The Urban Institute.

[65] U.S. Department of Health and Human Services, *HHS News*. "Teen Sex Down, New Study Shows. Secretary Shalala Announces New Teen Pregnancy Prevention Grant Programs." Press release, May 1, 1997. Washington, D.C.: HHS, National Center for Health Statistics.

[66] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 4.1.A

Percentage of youth in the United States who have had intercourse by each age, by gender: cohorts[a] age 20 in 1958-1960, 1970-1972,1985-1987, and 1990-1994

	Females who turned age 20 in:[b]			
Age at first intercourse	1958-1960	1970-1972	1985-1987	1990-1994
13	1	0	2	—
14	2	1	5	—
15	3	4	10	11
16	8	9	21	—
17	16	20	36	—
18	27	35	52	55
19	46	53	66	—
20	61	68	76	75

	Males who turned age 20 in:[b]			
Age at first intercourse	1958-1960	1970-1972	1985-1987	1990-1994
13	—	11	9	—
14	—	15	13	—
15	—	20	27	—
16	—	30	41	—
17	—	41	52	—
18	—	55	64	—
19	—	67	75	—
20	—	74	80	—

[a] Cohorts are defined as those individuals who turned 20 years old within the specified time period.

[b] Data are based on females ages 30-32 and 42-44 in the 1982 National Survey of Family Growth (NSFG), ages 21-23 and 36-38 in the 1988 NSFG, and ages 25-29 in the 1995 NSFG; and males ages 21-23 and 36-38 in the 1991 Survey of Men.

Source: Alan Guttmacher Institute. 1994. *Sex and America's Teenagers.* New York: Alan Guttmacher Institute, Figures 11 and 12, pages 22-23; Abma, J., Chandra, A., Mosher, W., Peterson, L., and Piccinino, L. 1997. "Fertility, family planning, and women's health: New data from the 1995 National Survey of Family Growth." *Vital and Health Statistics* 23 (19), Table 20.

Table SD 4.1.B

Percentage of students grades 9 through 12 in the United States who reported ever having sexual intercourse, by gender, grade, and race and Hispanic origin[a]: 1995 and 1997

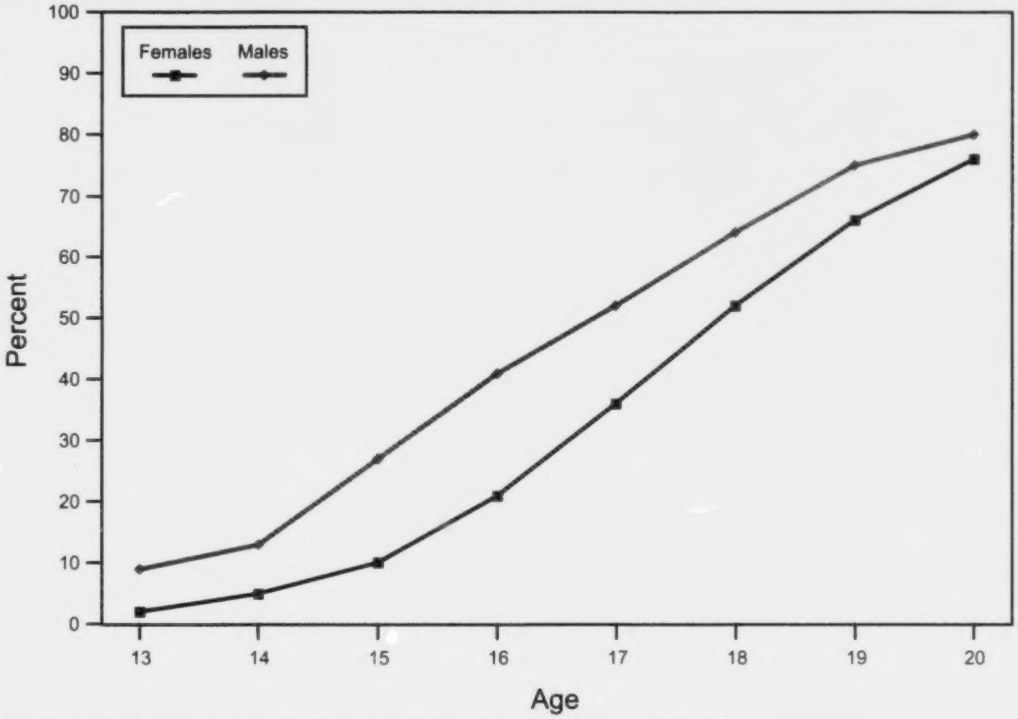
	1995			1997		
	Total	Male	Female	Total	Male	Female
Total	53	54	52	48	49	48
Grade						
9	37	41	32	38	42	34
10	48	50	46	43	42	44
11	59	57	60	50	49	50
12	66	67	66	61	60	62
Race and Hispanic origin[a]						
White, non-Hispanic	49	49	49	44	43	44
Black, non-Hispanic	73	81	67	73	80	66
Hispanic	58	62	53	52	58	46

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J., Blumson, P.S., Collins, J.L., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 26; Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 26.

Figure SD 4.1

Percentage of youth in the United States who have had intercourse, by age and gender: cohort[a] age 20 in 1985-1987



[a] Cohorts are defined as those individuals who turned 20 years old within the specified time period.

Source: Alan Guttmacher Institute. 1994. *Sex and America's Teenagers.* New York: Alan Guttmacher Institute, Figures 11 and 12, pages 22-23.

SD 4.2

SEXUALLY ACTIVE TEENS

Having become sexually experienced does not necessarily mean teenagers will be sexually active from that point on. They may still abstain from intercourse out of concern for the risk of pregnancy or sexually transmitted diseases or a preference for abstinence, or they may experience periods in which they do not have a sexual partner; nevertheless, research indicates that once a person has had sex, he or she is likely to continue to be sexually active. Among young adults ages 18 through 22 who had ever had intercourse, over 70 percent had a second experience of intercourse within six months of first intercourse.[67]

The percentage of teens in grades 9 through 12 who are sexually active—defined as having had sexual intercourse in the previous three months—remained steady at 38 percent from 1991 to 1995 before dropping to 35 percent in 1997 (see Table SD 4.2).

Differences by Gender. There is little difference between the percentages of male and female students who are sexually active. In 1997, 33 percent of males and 37 percent of females reported being sexually active.

Differences by Race and Hispanic Origin.[68] In 1997, black students were, at 54 percent, more likely than either white (32 percent) or Hispanic (35 percent) students to be sexually active (see Figure SD 4.2).

Differences by Grade. The percentage of teens who are sexually active rises as grade increases. Twelfth-grade students are nearly twice as likely to be sexually active as are 9th-grade students (see Table SD 4.2).

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[67] Moore, K.A., and Peterson, J.L. August 1989. *The Consequences of Teenage Pregnancy*. Final Report to NICHD and ASPE/HHS, Grant No. HD 21537.

[68] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 4.2

Percentage of students grades 9 through 12 in the United States who reported having had sexual intercourse in the previous three months, by gender, race and Hispanic origin[a], grade, and age: 1991, 1993, 1995, and 1997

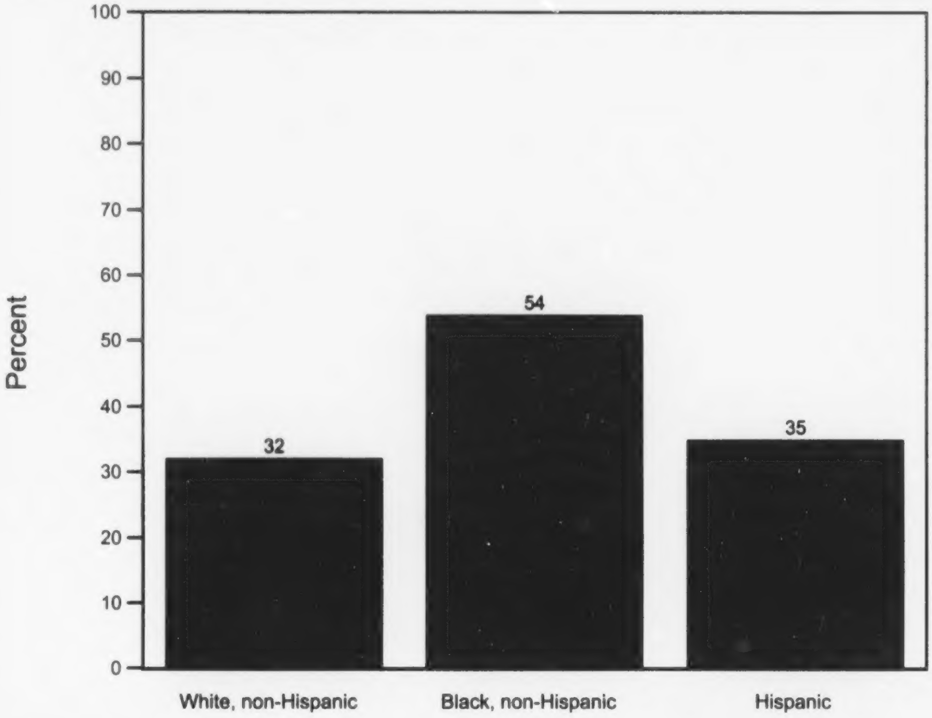
	1991	1993	1995	1997
Total	38	38	38	35
Gender				
Male	37	38	36	33
Female	38	38	40	37
Race and Hispanic origin[a]				
White, non-Hispanic	34	34	35	32
Black, non-Hispanic	59	59	54	54
Hispanic	37	39	39	35
Grade				
9	22	25	24	24
10	33	30	34	29
11	43	40	42	38
12	51	53	50	46
Age				
15	24	25	28	26
16	38	35	37	32
15 or 16	31	31	32	29

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data for 1991: Centers for Disease Control and Prevention. "1990-1991 Youth Risk Behavior Surveillance System." In *Chronic Disease and Health Promotion Reporting from the MMWR*, Table 1, p. 78; data for 1993: Kann, L.,Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 20; data for 1995: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 26; data for 1997: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J., Blumson, P.S., Collins, J.L., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 26; and unpublished data from the Centers for Disease Control and Prevention.

Figure SD 4.2

Percentage of youth in grades 9 through 12 in the United States who reported having had sexual intercourse in the previous three months, by race and Hispanic origin:[a] 1997



[a]Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Source: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J., Blumson, P.S., Collins, J.L., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 26.

SD 4.3

CONTRACEPTIVE USE BY TEENS

Sexual intercourse without contraception puts a teen at risk of unintended pregnancy and of contracting sexually transmitted diseases such as HIV/AIDS. The vast majority of teens do not want to become pregnant. Data from a national survey show that among teens who had first intercourse at age 17 or younger, fewer than 1 in 100 wanted a pregnancy to occur at that time. This was true for both males and females and for both blacks and whites.[69] Even among adolescents who give birth as a teenager, only 34 percent of the births are intended.[70]

Condoms and birth control pills are the most common forms of contraception used by sexually active teenagers.[71] In 1997, over half (57 percent) of sexually experienced students in grades 9 through 12 reported use of a condom during their last sexual intercourse, while only 17 percent reported use of the birth control pill (see Tables SD 4.3.A and SD 4.3.B).

Condom use among sexually experienced students increased between 1991 and 1997 from 46 percent to 57 percent (see Table SD 4.3.A). Use of birth control pills has remained relatively steady from 1993 to 1997 at 17 to 18 percent, with some sub-group differences that are discussed below (see Table SD 4.3.B).

Differences by Gender. Female students are less likely than male students to report having used a condom during their last intercourse (51 percent of females versus 63 percent of males in 1997).

Differences by Grade. Condom use among 12th-grade students is lower than among students in the earlier grades. The decrease is largest among young women, dropping from 55 percent to 43 percent between the 11th and 12th grades. In contrast, in 1997, only 8 percent of sexually experienced 9th-graders reported use of the pill, while nearly a quarter of 12th-graders reported its use (see Figure SD 4.3).

Differences by Race.[72] Black students report the highest use of condoms, while white students report the highest use of the pill. In 1997, white students were more likely to have used the pill during their last sexual intercourse (21 percent) than were either black students (12 percent) or Hispanic students (10 percent) (see Tables SD 4.3.A and SD 4.3.B).

It is important to note that the data presented here include only those teens who are in school. Teens out of school are likely to have lower rates of contraceptive use because their access to education regarding the risks associated with unprotected sex, as well as guidance on how to obtain protection, is more limited.

[69] Moore, K.A., and Peterson, J.L. August 1989. "The Consequences of Teenage Pregnancy." Final Report to NICHD and ASPE/DHHS, Grant No. HD 21537. See also preliminary results of research from the 1995 National Survey of Adolescent Males and the 1995 National Survey of Family Growth, The Urban Institute Fact Sheet (May 1, 1997), "New Data on Sexual Behaviors of Teenage Males."

[70] In the 1995 National Survey of Family Growth, the percentage of births intended at the time of conception to women ages 15 through 44 that occurred five years prior to the survey interview were as follows: 69 percent to all mothers, 34 percent to mothers under 20, 61 percent to mothers ages 20 through 24, 78 percent to mothers ages 25 through 29, and 80 percent to mothers ages 30 through 44. Abma, J.C., Chandra, A., Mosher, W.D., Peterson, L., and Piccinino, L. 1997. "Fertility, Family Planning, and Women's Health: New Data from the 1995 National Survey of Family Growth." National Center for Health Statistics, *Vital Health Statistics* 23 (19), Table 14.

[71] Peterson, L.S. "Contraceptive Use in the United States: 1982-90." *Advance Data*, No. 260, February 14, 1995. Division of Vital Statistics, National Center for Health Statistics, Centers for Disease Control and Prevention. Data from the National Survey of Family Growth.

[72] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 4.3.A

Percentage of currently sexually active high school students in the United States who reported using a condom during last sexual intercourse, by gender, grade, and race and Hispanic origin[a]: 1991, 1993, 1995, and 1997

		1991			1993	
	Total	Male	Female	Total	Male	Female
Total	46	55	38	53	59	46
Grade						
9	53	56	50	62	63	59
10	46	57	36	55	63	46
11	49	57	41	55	65	46
12	41	51	33	47	52	41
Race and Hispanic origin[a]						
White, non-Hispanic	47	55	38	52	59	46
Black, non-Hispanic	48	57	39	57	64	48
Hispanic	37	47	27	46	55	37

		1995			1997	
	Total	Male	Female	Total	Male	Female
Total	54	61	49	57	63	51
Grade						
9	63	66	59	59	59	58
10	60	68	52	59	65	53
11	52	57	49	60	65	55
12	50	57	43	52	61	43
Race and Hispanic origin[a]						
White, non-Hispanic	53	58	48	56	62	49
Black, non-Hispanic	66	72	61	64	68	59
Hispanic	44	56	33	48	55	40

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data for 1990: Centers for Disease Control and Prevention. "1990-1991 Youth Risk Behavior Surveillance System." In *Chronic Disease and Health Promotion Reporting from the MMWR*, Table 2, p. 47; data for 1993: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 20; data for 1995: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 28; also, unpublished tabulations from L. Kann, Centers for Disease Control and Prevention; data for 1997: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 28.

Table SD 4.3.B

Percentage of currently sexually active high school students in the United States who reported birth control pill use during last sexual intercourse, by gender, grade, and race and Hispanic origin[a]: 1993, 1995, and 1997

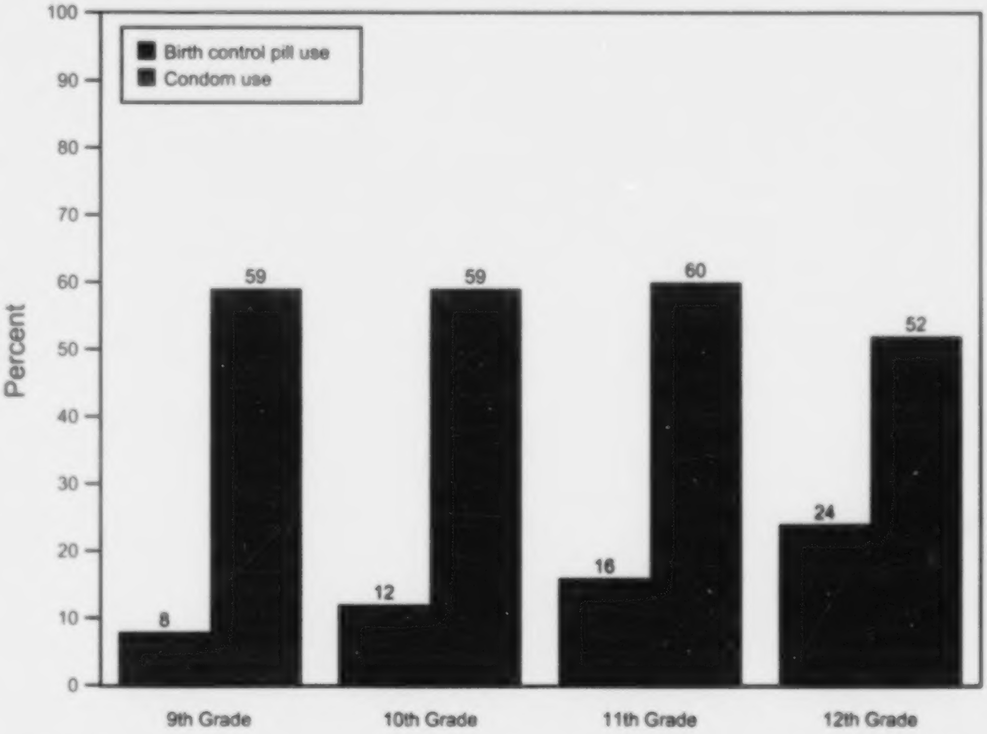
	1993			1995			1997		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	18	15	22	17	14	20	17	13	21
Grade									
9	9	8	11	11	10	13	8	8	8
10	14	10	17	12	9	16	12	8	17
11	17	12	22	15	13	17	16	12	19
12	26	23	29	25	21	29	24	19	30
Race and Hispanic origin[a]									
White, non-Hispanic	20	17	24	21	17	25	21	17	25
Black, non-Hispanic	15	11	21	10	8	12	12	9	15
Hispanic	12	10	15	11	14	9	10	7	13

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data for 1993: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 20; data for 1995: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 28; data for 1997: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 28.

Figure SD 4.3

Percentage of currently sexually active high school students in the United States who reported using a contraceptive during their last sexual intercourse, by grade and method: 1997



Source: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J., Blumson, P.S., Collins, J.L., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 28.

SD 4.4

NUMBER OF SEXUAL PARTNERS

The greater the number of sexual partners a person has, the greater the risk of contracting sexually transmitted diseases such as HIV/AIDS. While trend data on the sexual behavior of teens are limited, one study indicates that the proportion of sexually active females living in metropolitan areas who have had six or more sexual partners doubled from 1971 to 1988.[73]

Differences by Gender. Male youth generally report a higher number of sexual partners than do female youth. In 1995, 6 percent of sexually experienced males and 3 percent of sexually experienced females ages 15 through 19 reported having 5 or more sexual partners in a year. The number of sexual partners per year among sexually experienced females is concentrated at the lower end of the scale, with either zero or one partners most likely to be reported (see Table SD 4.4.A). Among high school students surveyed in 1997, 18 percent of males reported having had four or more sexual partners in their lifetime, compared with 14 percent of female students (see Table SD 4.4.B).

Differences by Race.[74] Black high school students are more likely to report having had four or more sexual partners in their lifetime than their white or Hispanic peers: 39 percent versus 12 and 16 percent, respectively, in 1997 (see Table SD 4.4.B).

Differences by Age at First Intercourse. Age at first intercourse has a strong association with the number of sexual partners a person has over a lifetime (see Table SD 4.4.C). Among teens who were age 20 in 1992, 74 percent of males who had sexual intercourse at age 14 or younger had six or more partners during their lifetime, compared with 48 percent of those who initiated sex at age 15 or 16, and 10 percent of those who did not have intercourse until age 17 or older. A similar pattern exists for females (see Figure SD 4.4).

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[73] Kost, K., and Forrest, J.D. 1992. "American Women's Sexual Behavior and Exposure to Risk of Sexually Transmitted Disease." *Family Planning Perspectives* 24 (6): 244-254. Based on data from the National Surveys of Young Women (1971, 1976, and 1979) and the 1988 National Survey of Family Growth.

[74] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 4.4.A

Percentage distribution of number of sexual partners in a year among sexually experienced teens ages 15 through 19 in the United States, by gender: 1995

	0 Partners	1 Partner	2 Partners	3-4 Partners	5 or more Partners
Males	10	44	26	14	6
Females	8	62	17	10	3

Source: Analyses of the 1995 National Survey of Family Growth, Cycle 5, by Child Trends; also Sonenstein, F.L., Stewart, K., Lindberg, L.D., Pernas, M., and Williams, S. 1997. *Involving Males in Preventing Teen Pregnancy: A Guide for Program Planners.* Washington, D.C.: The Urban Institute, pp. 16 and 17.

Table SD 4.4.B

Percentage of students in grades 9 through 12 in the United States who reported having four or more sex partners during lifetime, by gender, grade, and race and Hispanic origin[a]: 1993, 1995, and 1997

	1993			1995			1997		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	19	22	15	18	21	14	16	18	14
Grade									
9	11	15	6	13	18	7	12	16	8
10	16	19	13	16	20	11	14	16	12
11	20	23	16	19	21	17	17	17	16
12	27	31	23	23	25	21	21	21	21
Race and Hispanic origin[a]									
White, non-Hispanic	14	15	13	14	15	13	12	11	12
Black, non-Hispanic	43	59	27	36	52	22	39	53	25
Hispanic	19	26	11	18	24	12	16	20	10

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Data for 1993: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Douglas, K.A., Collins, M.E., Williams, B.I., Ross, J.G., Kolbe, L.J., and State and Local YRBSS Coordinators. "Youth Risk Behavior Surveillance—United States, 1993." In *CDC Surveillance Summaries*, March 24, 1995. *Morbidity and Mortality Weekly Report* 44 (SS-1): Table 20; data for 1995: Kann, L., Warren, C.W., Harris, W.A., Collins, J.L., Williams, B.I., Ross, J.G., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1995." In *CDC Surveillance Summaries*, September 27, 1996. *Morbidity and Mortality Weekly Report* 45 (SS-4): Table 26; data for 1997: Kann, L., Kinchen, S.A., Williams, B.I., Ross, J.G., Lowry, R., Hill, C.V., Grunbaum, J., Blumson, P.S., Collins, J.L., and Kolbe, L.J. "Youth Risk Behavior Surveillance—United States, 1997." In *CDC Surveillance Summaries*, August 14, 1998. *Morbidity and Mortality Weekly Report* 47 (SS-3): Table 26.

Table SD 4.4.C

Percentage distribution of number of lifetime sexual partners among sexually active 20-year-olds by age at first intercourse and by gender: 1992

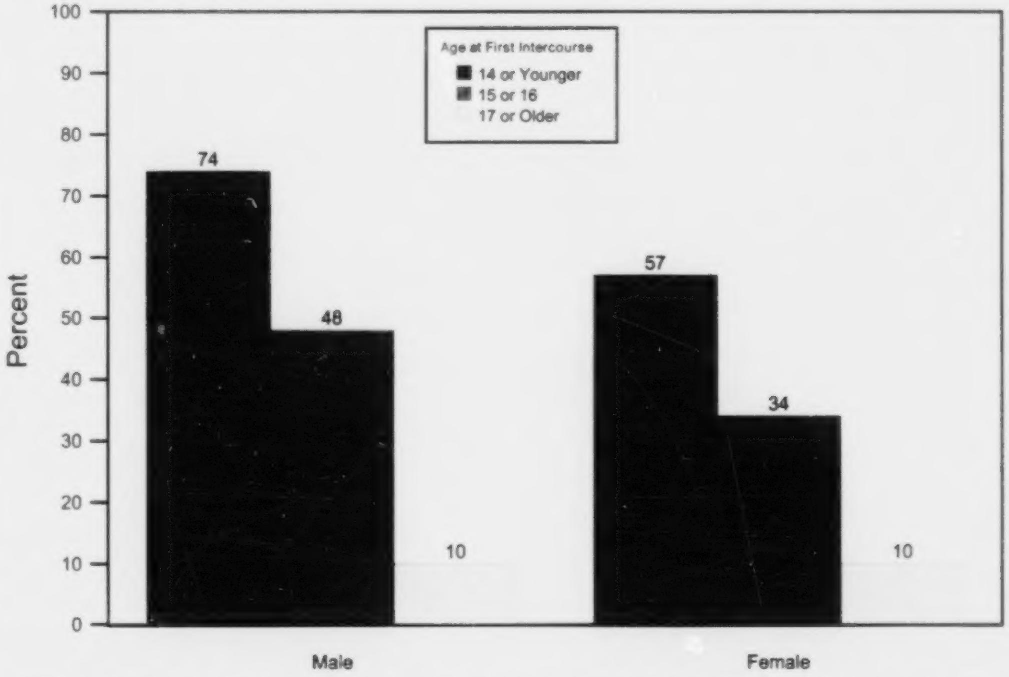
	First Intercourse at Age 14 or Younger	First Intercourse at Age 15 or 16	First Intercourse at Age 17 or Older
Males			
1 partner	2	9	42
2 or 3 partners	10	27	30
4 or 5 partners	15	16	19
6 or more partners	74	48	10
Females			
1 partner	2	10	45
2 or 3 partners	26	28	33
4 or 5 partners	16	28	13
6 or more partners	57	34	10

Note: Percents may not sum to 100 due to rounding.

Source: National Center for Health Statistics, Centers for Disease Control and Prevention. *1992 National Health Interview Survey—Youth Risk Behavior Supplement.* Tabulations by Child Trends.

Figure SD 4.4

Percentage of sexually active 20-year-olds in the United States with six or more lifetime sexual partners, by age at first intercourse: 1992



Source: National Center for Health Statistics, Centers for Disease Control and Prevention. *1992 National Health Interview Survey—Youth Risk Behavior Supplement.* Tabulations by Child Trends.

SD 4.5
TEEN PREGNANCY

The overwhelming majority of teens in the United States do not want to become parents as teens.[75] Among all pregnancies to teens ages 15 through 19 at pregnancy outcome, 78 percent were unintended at conception.[76]

From 1973 to 1990, the percentage of females ages 15 through 19 who became pregnant generally increased, rising from 9.6 percent in 1973 to 11.5 percent in 1990. This percentage had declined slightly to 11.1 percent by 1992 (see Table SD 4.5.A). In addition, among females ages 15 through 19, state data (not shown) indicate that from 1992 through 1995, pregnancy rates decreased significantly in all of the 43 reporting states and the District of Columbia.[77]

Differences by Age. Pregnancy is more prevalent among older teens. In 1992, 7.3 percent of females ages 15 through 17 became pregnant, compared with 16.8 percent among those ages 18 or 19 (see Table SD 4.5.B).

Differences by Race and Hispanic Origin.[78] Non-Hispanic white females ages 15 through 19 are less likely to become pregnant than are non-Hispanic black and Hispanic females. Among females ages 15 through 17, Hispanics are more than two times as likely, and non-Hispanic blacks more than three times as likely, to become pregnant as are non-Hispanic whites (12.8, 15.4, and 4.8 percent, respectively in 1992). Non-Hispanic black and Hispanic teen females ages 18 or 19 are at least twice as likely to become pregnant as their non-Hispanic white peers (see Table SD 4.5.B).

Sexually Experienced Teens. When the percentage of teens becoming pregnant is examined within the context only of those sexually experienced females ages 15 through 19, rather than all female teens ages 15 through 19, the percentage becoming pregnant has declined slightly, but steadily, from 25.4 percent in 1973 to 20.9 percent in 1991 (see Figure SD 4.5).

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[75] Henshaw, S.K. 1998. "Unintended Pregnancy in the United States." *Family Planning Perspectives* 30 (1): 24-29, 46; Alan Guttmacher Institute, 1994. *Sex and America's Teenagers.* New York: Alan Guttmacher Institute.

[76] Based on analysis of the 1995 National Survey of Family Growth (NSFG), cycle 5, by Child Trends. Unintended pregnancies include unintended births and all abortions. See "Henshaw, S.K. 1998. "Unintended Pregnancy in the United States." Family Planning Perspectives 30 (1):24-29, 46.

[77] "State-Specific Pregnancy Rates among Adolescents: United States, 1992-1995." *Morbidity and Mortality Weekly Report,* June 26, 1998.

[78] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 4.5.A

Percentage of females under age 20 in the United States experiencing pregnancy,[a] by age for all females and sexually experienced females: selected years, 1973-1992

	1973	1975	1980	1985	1990	1991	1992
All females ages 14 or younger[b]	1.4	1.5	1.6	1.6	1.7	1.7	1.7
All females ages 15-17	6.7	6.9	7.3	7.1	7.6	7.5	7.3
All females ages 18 or 19	14.1	14.9	16.2	15.8	16.6	17.1	16.8
All females ages 15-19	9.6	10.1	11.0	10.7	11.5	11.5	11.1
Sexually experienced females ages 15-19[c]	25.4	24.3	23.5	21.4	20.9	20.9	n/a

[a] Pregnancies are calculated by summing the number of live births, the number of abortions, and the estimated number of spontaneous fetal losses. Spontaneous fetal losses are based on data from the National Survey of Family Growth conducted by the National Center for Health Statistics.

[b] Denominator is 14-year-old females.

[c] Data for sexually experienced females are not available for 1992.

Sources: Henshaw, S.K. 1998. *U.S. Teenage Pregnancy Statistics*. New York: Alan Guttmacher Institute, Table 2; Alan Guttmacher Institute. 1994. *Sex and America's Teenagers*. New York: Alan Guttmacher Institute. Figure 30; Ventura, S.J., Taffel, S.M., Mosher, W.D., Wilson, J.B., and Henshaw, S.K. "Trends in Pregnancies and Pregnancy Rates: Estimates for the United States, 1980-92." *Monthly Vital Statistics Report* 43 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, 1995, Table 8; also, unpublished data from Ventura, Mosher, and Henshaw, National Center for Health Statistics.

Table SD 4.5.B

Percentage of females ages 15 through 19 experiencing pregnancy[a] by age and by race and Hispanic origin[b]: 1990-1992

	1990	1991	1992
Females ages 15-17			
Total	7.6	7.5	7.3
Race and Hispanic origin[b]			
White, non-Hispanic	5.4	5.1	4.8
Black, non-Hispanic	15.8	15.8	15.4
Hispanic	11.7	12.4	12.8
Females ages 18 or 19			
Total	16.6	17.1	16.8
Race and Hispanic origin[b]			
White, non-Hispanic	13.0	13.1	12.6
Black, non-Hispanic	29.3	29.8	29.9
Hispanic	24.4	26.1	26.5
Females ages 15-19			
Total	11.5	11.5	11.1
Race and Hispanic origin[b]			
White, non-Hispanic	8.8	8.5	7.9
Black, non-Hispanic	21.7	21.7	21.2
Hispanic	17.0	18.0	18.4

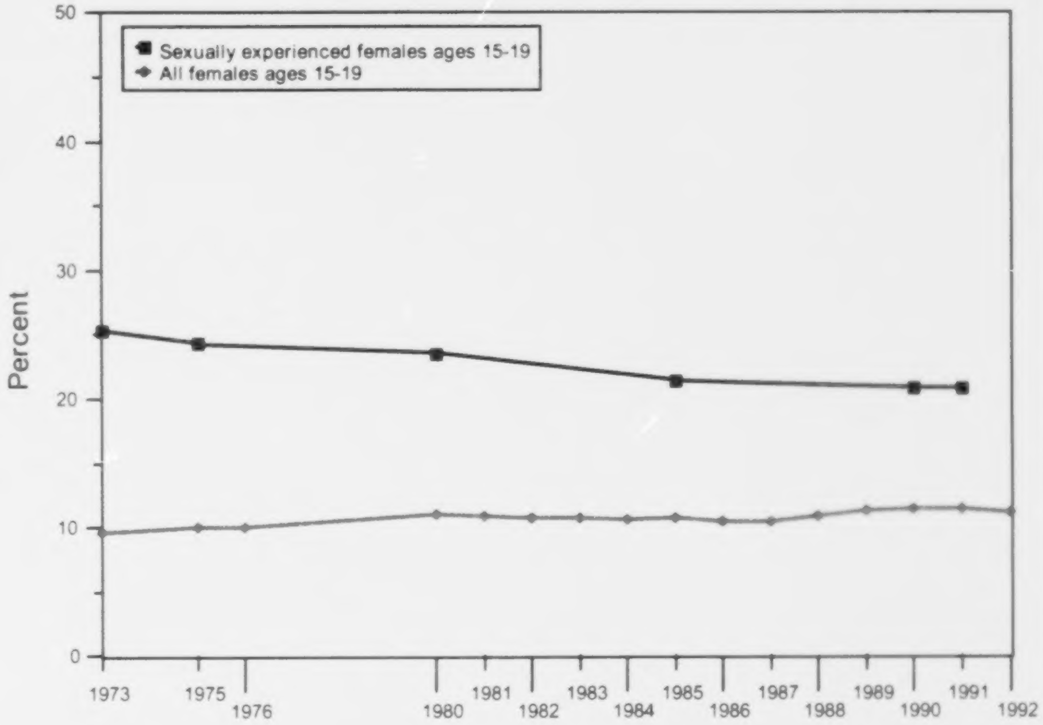
[a] Pregnancies are calculated by summing the number of live births, the number of abortions, and the estimated number of spontaneous fetal losses. Spontaneous fetal losses are based on data from the National Survey of Family Growth conducted by the National Center for Health Statistics.

[b] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Ventura, S.J., Taffel, S.M., Mosher, W.D., Wilson, J.B., and Henshaw, S.K. 1995. "Trends in Pregnancies and Pregnancy Rates: Estimates for the United States, 1980-92." *Monthly Vital Statistics Report* 43 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, 1995, Table 8; also, unpublished tabulations, Division of Vital Statistics, National Center for Health Statistics.

Figure SD 4.5

Percentage of females ages 15 through 19 in the United States experiencing pregnancy[a] for all females ages 15 through 19 and for sexually experienced females ages 15 through 19: selected years, 1973-1992



[a]Pregnancies are calculated by summing the number of live births, the number of abortions, and the estimated number of spontaneous fetal losses. Spontaneous fetal losses are based on data from the National Survey of Family Growth conducted by the National Center for Health Statistics.

Sources: Henshaw, S.K. 1998. *U.S. Teenage Pregnancy Statistics.* New York: Alan Guttmacher Institute, Table 2; Alan Guttmacher Institute. 1994. *Sex and America's Teenagers.* New York: Alan Guttmacher Institute, Figure 30; Ventura, S.J., Taffel, S.M., Mosher, W.D., Wilson, J.B., and Henshaw, S.K. 1995. "Trends in Pregnancies and Pregnancy Rates: Estimates for the United States, 1980-92." *Monthly Vital Statistics Report* 43 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, Table 8; also, unpublished data from Ventura, Mosher, and Henshaw, National Center for Health Statistics.

SD 4.6

ABORTION AMONG TEENS

The proportion of females ages 15 through 19 who obtained an abortion during the previous year increased from 2.3 percent to 4.4 percent between 1973 and 1985, presumably influenced both by the legalization of abortion and increasing levels of sexual activity and pregnancy (see Section SD 4.2, Section SD 4.5, and Table SD 4.6.A). By 1992, the proportion obtaining abortions had dropped to 3.6 percent and it continued to decline, reaching 2.9 percent in 1996 (the most recent year for which data are available). Similar patterns occurred among both younger teens (ages 15 through 17) and older teens (ages 18 or 19).

There has not been a steady trend in the propensity of pregnant teens to give birth versus obtain an abortion over the past 20 years (see Figure SD 4.6). In 1972, the proportion of pregnancies (excluding miscarriages) to females ages 15 through 19 that ended in birth was 76 percent. During the rest of the 1970s, this proportion declined as abortion increased. Throughout most of the 1980s, however, the proportion of teen pregnancies ending in birth remained fairly stable at around 55 percent. By 1995, there was an increase to 65 percent in the proportion of teen pregnancies ending in birth, indicating a trend toward fewer abortions among pregnant teens.

Differences by Age. Older teens ages 18 or 19 are more likely to have had an abortion than are younger teens ages 15 through 17. In 1996, 1.9 percent of younger teens and 4.5 percent of older teens obtained an abortion (see Table SD 4.6.A).

Differences by Race and Hispanic Origin.[79] Non-Hispanic black teens are more likely to have had an abortion than are their non-Hispanic white and Hispanic peers. Among non-Hispanic black females ages 15 through 19, 6.6 percent obtained an abortion in 1996, compared with 1.9 percent of non-Hispanic white and 3.9 percent of Hispanic females (see Table SD 4.6.B).

Sexually Experienced Teens. The percentage of teens who are sexually experienced has increased during the past several decades; therefore, it is reasonable to consider abortion in light of this trend. When abortion rates are calculated among females ages 15 through 19 who have ever had intercourse, the data indicate that the proportion obtaining abortions increased from 5.9 percent in 1973 to 9.1 percent in 1980, then declined to 6.8 percent in 1991 (see Table SD 4.6.A). Although a larger proportion of teen females were sexually experienced in 1990 than in 1980 (see Section SD 4.2), a smaller proportion of these sexually experienced teens obtained abortions.

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[79] Estimates for whites and blacks exclude Hispanics of those races.

Table SD 4.6.A

Percentage of females under age 20 in the United States obtaining an abortion, by all females and sexually experienced females: selected years, 1973-1996

	1973	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996
All females ages 14 or younger[a]	0.6	0.7	0.8	0.9	0.8	0.7	0.8	—	—	—	—
All females ages 15-17	1.9	2.4	3.0	3.1	2.7	2.4	2.3	2.3	2.1	2.0	1.9
All females ages 18 or 19	2.9	4.2	6.1	6.2	5.8	5.6	5.4	5.2	4.9	4.6	4.5
All females ages 15-19	2.3	3.1	4.3	4.4	4.0	3.8	3.6	3.4	3.2	3.0	2.9
Sexually experienced females ages 15-19[b]	5.9	7.5	9.1	8.5	7.3	6.8	n/a	—	—	—	—

[a] Denominator is 14-year-old females.

[b] Data for sexually experienced females for 1985 were interpolated from 1980 and 1988 data. Data for sexually experienced females are not available for 1992-1995. Data for females ages 14 or younger not available for 1993-1995.

Sources: Henshaw, S.K. 1999. *U.S. Teenage Pregnancy Statistics.* New York: Alan Guttmacher Institute, Table 2 Alan Guttmacher Institute. 1994. *Sex and America's Teenagers.* 1994. New York: Alan Guttmacher Institute, Figure 36. Both are based on data from abortion providers and sexual experience data from the National Survey of Family Growth; also, unpublished data from Ventura, Mosher, and Henshaw, National Center for Health Statistics and published and unpublished data from the Alan Guttmacher Institute.

Table SD 4.6.B

Percentage of females ages 15 through 19 in the United States obtaining an abortion during the year, by age and by race and Hispanic origin: 1990-1996

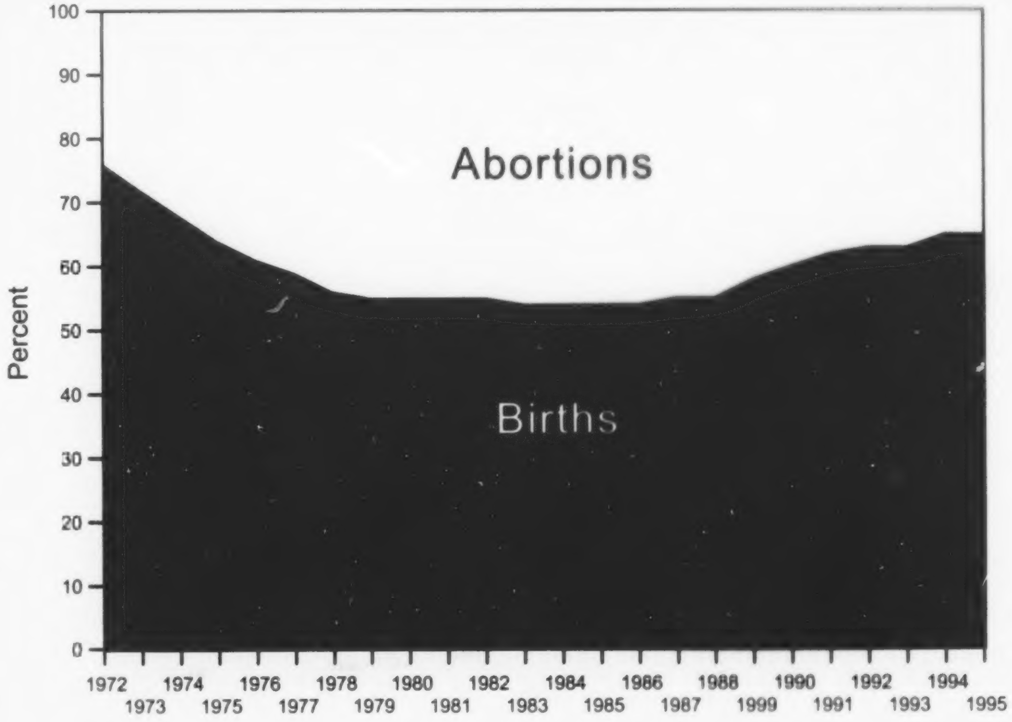
	1990	1991	1992	1993	1994	1995	1996
Females ages 15-17							
Total	2.7	2.4	2.3	2.3	2.1	2.0	1.9
Race and Hispanic origin[a]							
White, non-Hispanic	2.1	1.8	1.6	1.5	1.4	1.3	1.3
Black, non-Hispanic	5.8	5.5	5.4	5.4	5.0	4.6	4.4
Hispanic	2.4	2.5	2.8	2.7	2.8	2.5	2.5
Females ages 18 or 19							
Total	5.8	5.6	5.4	5.2	4.9	4.6	4.5
Race and Hispanic origin[a]							
White, non-Hispanic	4.7	4.3	3.9	3.7	3.3	3.1	2.9
Black, non-Hispanic	11.7	11.6	11.7	11.5	10.8	9.8	10.0
Hispanic	6.0	6.3	6.6	6.4	6.3	5.9	6.0
Females ages 15-19							
Total	4.0	3.8	3.6	3.4	3.2	3.0	2.9
Race and Hispanic origin[a]							
White, non-Hispanic	3.2	2.8	2.5	2.4	2.2	2.0	1.9
Black, non-Hispanic	8.4	8.1	8.0	7.8	7.3	6.6	6.6
Hispanic	3.9	4.0	4.3	4.2	4.2	3.9	3.9

[a] Estimates for whites and blacks exclude Hispanics of those races. Persons of Hispanic origin may be of any race.

Sources: Ventura, S.J., Mosher, W.D., Curtin, S.D., Abma, J.D., and Henshaw, S.K. 1999. "Trends in Pregnancies and Pregnancy Rates and Outcomes: Estimates for the United States, 1976 - 1996." Hyattsville, Md.: National Center for Health Statistics, Vital and Health Statistics 21(56); also Henshaw, S.K. 1999. U.S. Teenage Pregnancy Statistics. New York: The Alan Guttmacher Institute, Table 2.

Figure SD 4.6

Percentage of pregnancies among females ages 15 through 19 in the United States ending in birth and ending in abortion: 1972-1995



Note: Pregnancies do not include miscarriages.

Sources: Alan Guttmacher Institute. 1994. *Sex and America's Teenagers.* New York: Alan Cuttmacher Institutes. Figure 33. Based on data from abortion providers and sexual experience data from the National Survey of Family Growth. Also, unpublished data provided by Stanley Henshaw, the Alan Guttmacher Institute.

SD 4.7

TEEN BIRTHS

Research indicates that giving birth as a teen can have negative consequences on both mothers and their children over and above the effects of the mother's disadvantaged background. Giving birth at an early age can limit a young woman's options regarding education and employment opportunities, increases the likelihood that she will need public assistance, and can have negative effects on the development of her children.[80]

Between 1960 and 1985, birth rates for teens ages 15 through 19 dropped from 89.1 to 51.0 per 1,000 teen women. This trend reversed between 1985 and 1991, and the teen birth rate increased to 62.1 per 1,000 teen women. Since 1991, the teen birth rate has again turned downward, declining to 51.1 births per 1,000 teen women by 1998 (see Figure SD 4.7).

Differences by Race and Hispanic Origin.[81] The trends described in the previous paragraph are evident for white, black, and American Indian/Alaska Native[82] women ages 15 through 19. American Indian/Alaska Native women have followed a similar trend since 1980 (the first year for which data are available for this group). In contrast, the birth rate for Hispanic teens increased from 82.2 per 1,000 teen women in 1980 (the first year for which data were available) to 106.7 per 1,000 teen women in 1991 and remained fairly stable through 1994. However, the birth rate dropped to 97.3 per 1,000 teen women in 1997, and to 93.7 in 1998 (see Table SD 4.7). Similarly, the Asian/Pacific Islander teen birth rate, although substantially lower than all other racial and ethnic groups, increased slightly through 1991 and held fairly steady through 1994. The birth rate has since declined to 23.1 births per 1,000 teen women in 1998.

The birth rate for black teens has remained about twice that of white teens since 1960. In 1998, the birth rate for white teens was 45.4 per 1,000 teen women, and for black teens it was 85.3 per 1,000 teen women. Black teens had the highest birth rate until 1994, when the rate for Hispanic teens surpassed that of blacks; the Hispanic rate has remained at a higher level through 1998. Black teens experienced a 26 percent drop in birth rates between 1991 and 1998, from 115.5 to 85.3 per 1,000 women ages 15 through 19. The birth rate for black teens is now at its lowest point in the almost 40 years for which detailed statistics for black teens have been available (see Table SD 4.7).

Differences by Age. Teen birth rates increase with age. In 1998, the birth rate for all teens ages 15 through 17 was 30.4 per 1,000 teen women; for those ages 18 or 19, it was 82.0 per 1,000. Rates for teen females ages 10 through 14 were considerably lower at 1.0 per 1,000. For black and Hispanic teens, the birth rate among 18- and 19-year-olds was more than twice that of the 15- through 17-year-old teen females. The birth rate of white, American Indian/Alaska Native, and Asian/Pacific Islander teen females ages 18 or 19 are over two and a half times that of younger teens ages 15 through 17.

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[80] Moore, K.A. 1993. *Teenage Childbearing: A Pragmatic Perspective.* Washington, D.C.: Child Trends, Inc.; Maynard, R.A. (ed.). 1996. *Kids Having Kids: A Robin Hood Foundation Special Report on the Costs of Adolescent Childbearing.* New York: The Robin Hood Foundation.

[81] Estimates for white and black teens include those of Hispanic origin. Teens of Hispanic origin may be of any race.

[82] Data for American Indians/Alaska Natives available since 1980.

SEE TABLE FOLLOWING PAGES

Table SD 4.7 (Part 1)

Teen birth rates in the United States by age of mother and by race[a] and Hispanic origin[c] (births per 1,000 females in each age group): selected years, 1960-1998

	1960	1965	1970	1975	1980[e]	1985
All races						
Ages 10-14	—	—	1.2	1.3	1.1	1.2
Ages 15-17	43.9	36.6	38.8	36.1	32.5	31.0
Ages 18 or 19	166.7	124.5	114.7	85.0	82.1	79.6
Ages 15-19	89.1	70.5	68.3	55.6	53.0	51.0
White[b]						
Ages 10-14	—	—	0.5	0.6	0.6	0.6
Ages 15-17	35.5	27.8	29.2	28.0	25.5	24.4
Ages 18 or 19	154.6	111.9	101.5	74.0	73.2	70.4
Ages 15-19	79.4	60.6	57.4	46.4	45.4	43.3
White, non-Hispanic						
Ages 10-14	—	—	—	—	0.4	—
Ages 15-17	—	—	—	—	22.4	—
Ages 18 or 19	—	—	—	—	67.7	—
Ages 15-19	—	—	—	—	41.2	—
Black[b]						
Ages 10-14	—	—	5.2	5.1	4.3	4.5
Ages 15-17	—	99.3	101.4	85.6	72.5	69.3
Ages 18 or 19	—	227.6	204.9	152.4	135.1	132.4
Ages 15-19	156.1	144.6	140.7	111.8	97.8	95.4
Hispanic[c,d]						
Ages 10-14	—	—	—	—	1.7	—
Ages 15-17	—	—	—	—	52.1	—
Ages 18 or 19	—	—	—	—	126.9	—
Ages 15-19	—	—	—	—	82.2	—
American Indian/Alaska Native[b]						
Ages 10-14	—	—	—	—	1.9	1.7
Ages 15-17	—	—	—	—	51.5	47.7
Ages 18 or 19	—	—	—	—	129.5	124.1
Ages 15-19	—	—	—	—	82.2	79.2
Asian/Pacific Islander[b]						
Ages 10-14	—	—	—	—	0.3	0.4
Ages 15-17	—	—	—	—	12.0	12.5
Ages 18 or 19	—	—	—	—	46.2	40.8
Ages 15-19	—	—	—	—	26.2	23.8

*See notes on page 392

Table SD 4.7 (Part 2)

Teen birth rates in the United States by age of mother and by race[a] and Hispanic origin[c] (births per 1,000 females in each age group): selected years, 1960-1998

	1990	1991	1992	1993	1994	1995	1996	1997	1998
All races									
Ages 10-14	1.4	1.4	1.4	1.4	1.4	1.3	1.2	1.1	1.0
Ages 15-17	37.5	38.7	37.8	37.8	37.6	36.0	33.8	32.1	30.4
Ages 18 or 19	88.6	94.4	94.5	92.1	91.5	89.1	86.0	83.6	82.0
Ages 15-19	59.9	62.1	60.7	59.6	58.9	56.8	54.4	52.3	51.1
White[b]									
Ages 10-14	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
Ages 15-17	29.5	30.7	30.1	30.3	30.7	30.0	28.4	27.1	25.9
Ages 18 or 19	78.0	83.5	83.8	82.1	82.1	81.2	78.4	75.9	74.7
Ages 15-19	50.8	52.8	51.8	51.1	51.1	50.1	48.1	46.3	45.4
White, non-Hispanic									
Ages 10-14	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4
Ages 15-17	23.2	23.6	22.7	22.7	22.8	22.0	20.6	19.4	18.4
Ages 18 or 19	66.6	70.5	69.8	67.7	67.4	66.1	63.7	61.9	60.6
Ages 15-19	42.5	43.4	41.7	40.7	40.4	39.3	37.6	36.0	35.2
Black[b]									
Ages 10-14	4.9	4.8	4.7	4.6	4.6	4.2	3.6	3.3	2.9
Ages 15-17	82.3	84.1	81.3	79.8	76.3	69.7	64.7	60.8	56.8
Ages 18 or 19	152.9	158.6	157.9	151.9	148.3	137.1	132.5	130.1	126.8
Ages 15-19	112.8	115.5	112.4	108.6	104.5	96.1	91.4	88.2	85.3
Hispanic[c,d]									
Ages 10-14	2.4	2.4	2.6	2.7	2.7	2.7	2.6	2.3	2.1
Ages 15-17	65.9	70.6	71.4	71.7	74.0	72.9	69.0	66.3	62.3
Ages 18 or 19	147.7	158.5	159.7	159.1	158.0	157.9	151.1	144.3	140.2
Ages 15-19	100.3	106.7	107.1	106.8	107.7	106.7	101.8	97.4	93.7
American Indian/Alaska Native[b]									
Ages 10-14	1.6	1.6	1.6	1.4	1.9	1.8	1.7	1.7	1.6
Ages 15-17	48.5	52.7	53.8	53.7	51.3	47.8	46.4	45.3	44.3
Ages 18 or 19	129.3	134.3	132.6	130.7	130.3	130.7	122.3	117.6	118.0
Ages 15-19	81.1	85.0	84.4	83.1	80.8	78.0	73.9	71.8	71.8
Asian/Pacific Islander[b]									
Ages 10-14	0.7	0.8	0.7	0.6	0.7	0.7	0.6	0.5	0.4
Ages 15-17	16.0	16.1	15.2	16.0	16.1	15.4	14.9	14.3	13.7
Ages 18 or 19	40.2	43.1	43.1	43.3	44.1	43.4	40.4	39.3	38.2
Ages 15-19	26.4	27.4	26.6	27.0	27.1	26.1	24.6	23.7	23.1

*See notes on page 392

Table SD 4.7 (Part 3)

Teen birth rates in the United States by age of mother and by race[a] and Hispanic origin (births per 1,000 females in each age group): selected years, 1960-1998

[a] Beginning in 1980, births have been tabulated by race and ethnicity of the mother. Prior to 1980, births were tabulated by race of child, assigning a child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite.

[b] Includes persons of Hispanic origin.

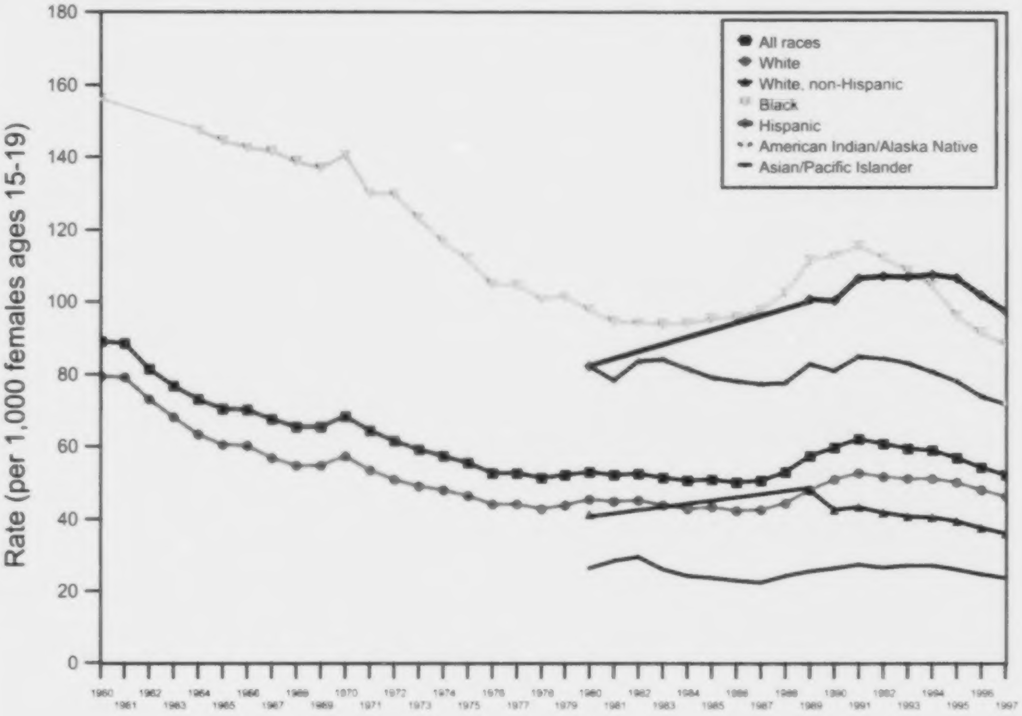
[c] Persons of Hispanic origin may be of any race.

[d] Data for Hispanics have been available only since 1980, with 22 states reporting in 1980, representing 90 percent of the Hispanic population. Hispanic birth data were reported by 23 states and the District of Columbia in 1985; 48 states and District of Columbia in 1990; 49 states and the District of Columbia in 1991 and 1992; and all 50 states and the District of Columbia since 1993. Rates in 1985 were not calculated for Hispanics because estimates for populations were not available.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 4 and 9; Ventura, S.J., Mathews, T.J., and Curtin, S.C. 1998. "Declines in Teenage Birth Rates: National and State Patterns, 1991-1997." *National Vital Statistics Reports* 47 (12). Hyattsville, Md.: National Center for Health Statistics, Tables 1 and 2; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Report of Final Natality Statistics, 1996." *Monthly Vital Statistics Report* 46 (11, supp), Hyattsville, Md.: National Center for Health Statistics, Table 4; National Center for Health Statistics. *Vital Statistics of the United States, Volume I, Natality.* Annual Issues, Table "Birth Rates for Teenage Mothers 15-19 Years, by Age of Mother and Race and Hispanic Origin: United States, 1940-97"; and Mathews, T.J., Ventura, S.J., Curtin, S.C., and Martin, J.A. 1998. "Births of Hispanic Origin, 1989-1995." *Monthly Vital Statistics Report* 46 (6), Table 1.

Figure SD 4.7

Teen birth rates in the United States, by race[a] and Hispanic origin[b] (births per 1,000 females ages 15 through 19): 1960-1997



[a] Beginning in 1980, births have been tabulated by race and ethnicity of the mother. Prior to 1980, births were tabulated by race of child, assigning a child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite. Data for black and white births include births of Hispanic origin.

[b] Persons of Hispanic origin may be of any race. Data for Hispanics have been available only since 1980, with 22 states reporting in 1980, representing 90 percent of the Hispanic population. Hispanic birth data were reported by 23 states and the District of Columbia in 1985; 48 states and the District of Columbia in 1990; 49 states and the District of Columbia in 1991 and 1992; and all 50 states and the District of Columbia since 1993. Rates in 1985 were not calculated for Hispanics because estimates for populations were not available.

Sources: Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 4 and 9; Ventura, S.J., Mathews, T.J., and Curtin, S.C. 1999. "Declines in Teenage Birth Rates, 1991-1998: Update of National and State Trends." *National Vital Statistics Reports* 47(26). Hyattsville, Md.: National Center for Health Statistics, Tables 1 and 2; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Report of Final Natality Statistics, 1996." *Monthly Vital Statistics Report* 46 (11, supp), Hyattsville, Md.: National Center for Health Statistics, Table 4; National Center for Health Statistics. *Vital Statistics of the United States, Volume 1, Natality.* Annual Issues, Table "Birth Rates for Teenage Mothers 15-19 Years, by Age of Mother and Race and Hispanic Origin: United States, 1940-97." and Mathews, T.J., Ventura, S.J., Curtin, S.C., and Martin, J.A. 1998. "Births of Hispanic Origin, 1989-1995." *Monthly Vital Statistics Report* 46 (6), Table 1.

SD 4.8
TEEN NONMARITAL BIRTHS

Nonmarital childbearing has consequences for the child, the parent, and society. Raising a child is a challenging task, even for two parents. A large body of research suggests that the absence of a father is associated with negative outcomes for children when they grow up.[83] For example, studies have linked growing up with a single parent to lower educational attainment for the child.[84] In 1998, 30 percent of nonmarital births were to teenagers.[85] Bearing children outside of marriage is a particularly troubling development for this age group because these young women often have little education and lack the ability to support their families economically, especially as single parents.

Nonmarital births as a percent of all births have increased among teens of all ages and across all racial and ethnic groups since 1960 (see Figure SD 4.8). Among all young women ages 15 through 19, 15 percent of births were nonmarital in 1960, compared with 79 percent in 1998 (see Table SD 4.8). The percentage of births to teens that occurred outside of marriage rose fairly steadily through 1994; however, the rather sharp increase between 1993 and 1994 (from 71 to 75 percent) is largely if not completely the result of improvements in the identification of nonmarital births in two states: Texas and Michigan.[86] Despite declines in birth rates for unmarried teens since 1994, the percentage of teen nonmarital births has continued to increase through 1998 to 79 percent. The increase in the percent is due to the decline in births and birth rates for married teens.[87]

Differences by Race.[88] Nonmarital childbearing is higher among black teens than among white and Hispanic teens. In 1998, 96 percent of births to black females ages 15 through 19 were nonmarital, compared with 72 percent for whites and 73 percent for Hispanics.

Differences by Age. Younger teens who give birth are more likely to be unmarried when they deliver than are older teens in each year and across racial/ethnic groups. In 1998, 87 percent of births to 15- through 17-year-olds were to unmarried mothers, compared with 74 percent among 18- through 19-year-olds.

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[83] McLanahan, S., and Sandefur, G. 1994. "Growing Up with a Single Parent: What Hurts, What Helps." Cambridge, Mass.: Harvard University Press; Haveman, R., and Wolfe, B. 1994. *Succeeding Generations: On the Effects of Investments in Children.* New York: Russell Sage Foundation.

[84] Knox, V., and Bane, M.J. 1994. "Child Support and Schooling." In *Child Support and Child-Well-Being* (I. Garfinkel, S. McLanahan, and P. Robins, eds.). Washington, D.C.: The Urban Institute.

[85] Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Table 17.

[86] Ventura, S.J., Martin, J.A., Mathews, T.J. and Clarke, S.C. 1996. "Advance Report of Final Natality Statistics, 1994." *Monthly Vital Statistics Report* 44 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, 1996.

[87] Ventura, S.J., Mathews, T.J., and Curtin, S.C. "Declines in Teenage Birth Rates, 1991-1998: Update of National and State Trends." *National Vital Statistics Reports* 47(26). Hyattsville, Md.: National Center for Health Statistics, 1999.

[88] Estimates for white and black teens include those of Hispanic origin. Teens of Hispanic origin may be of any race.

SEE TABLE FOLLOWING PAGES

Table SD 4.8 (Part 1)

Percentage of all births to unmarried women ages 15 through 19 in the United States, by age of mother and by race[a] and Hispanic origin[c]: selected years, 1960-1998

	1960	1965	1970	1975	1980	1985	1990
All races							
Ages 15-17	24	33	43	51	62	71	78
Ages 18 or 19	11	15	22	30	40	51	61
Ages 15-19	15	21	30	38	48	58	67
White[b]							
Ages 15-17	12	17	25	33	45	58	68
Ages 18 or 19	5	9	14	17	27	38	51
Ages 15-19	7	11	17	23	33	45	56
Black[b]							
Ages 15-17	—	—	76	87	93	96	96
Ages 18 or 19	—	—	52	68	80	86	89
Ages 15-19	—	—	63	77	86	90	92
Hispanic[c,d]							
Ages 15-17	—	—	—	—	51	61	68
Ages 18 or 19	—	—	—	—	36	46	54
Ages 15-19	—	—	—	—	42	51	59

[a] Beginning in 1980, births were tabulated by race and ethnicity of the mother. Prior to 1980, births were tabulated by race of child, assigning a child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite.

[b] Includes persons of Hispanic origin.

[c] Persons of Hispanic origin may be of any race.

[d] Data for Hispanics have been available only since 1980, with 22 states reporting in 1980, representing 90 percent of the Hispanic population. Hispanic birth data were reported by 23 states and the District of Columbia in 1985; 48 states and the District of Columbia in 1990; 49 states and the District of Columbia in 1991 and 1992; and all 50 states and the District of Columbia since 1993.

[e] Increases between 1993 and 1994 were due primarily to improvements in the identification of nonmarital births in Texas and Michigan.

Sources: Ventura S.J. 1993. "Births to Unmarried Mothers: United States, 1980-1992." National Center for Health Statistics, *Vital and Health Statistics*, Series 21, No. 53, Table 5; Ventura, S.J. and Curtin, S.C. 1999. "Recent Trends in Teen Births in the United States." *Statistical Bulletin* 80 (1). Hyattsville, Md.: National Center for Health Statistics, Table 3; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Table 17. Venture, S.J., Mathews, T.J., Curtin, S.C. 1999. "Declines in Teenage Birth Rates, 1991-1998: Update of National and State Trends." National Vital Statistics Report 47(26). Hyattsville, Md.; National Center for Health Statistics, Table A. Also unpublished tabulations, National Center for Health Statistics.

Table SD 4.8 (Part 2)

Percentage of all births to unmarried women ages 15 through 19 in the United States, by age of mother and by race[a] and Hispanic origin[c]: selected years, 1960-1998

	1991	1992	1993	1994[e]	1995	1996	1997	1998
All races								
Ages 15-17	79	79	80	84	84	84	87	87
Ages 18 or 19	63	65	66	70	70	71	73	74
Ages 15-19	69	70	71	75	75	76	78	79
White[b]								
Ages 15-17	70	71	72	78	77	79	82	83
Ages 18 or 19	53	55	57	62	62	63	65	67
Ages 15-19	59	60	62	68	68	69	71	72
Black[b]								
Ages 15-17	96	96	96	98	98	98	98	98
Ages 18 or 19	90	90	91	93	93	94	94	94
Ages 15-19	92	93	93	95	95	95	96	96
Hispanic[c,d]								
Ages 15-17	69	69	69	77	75	75	80	82
Ages 18 or 19	56	57	58	65	62	63	66	67
Ages 15-19	61	62	63	70	67	68	72	73

[a] Beginning in 1980, births were tabulated by race and ethnicity of the mother. Prior to 1980, births were tabulated by race of child, assigning a child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite.

[b] Includes persons of Hispanic origin.

[c] Persons of Hispanic origin may be of any race.

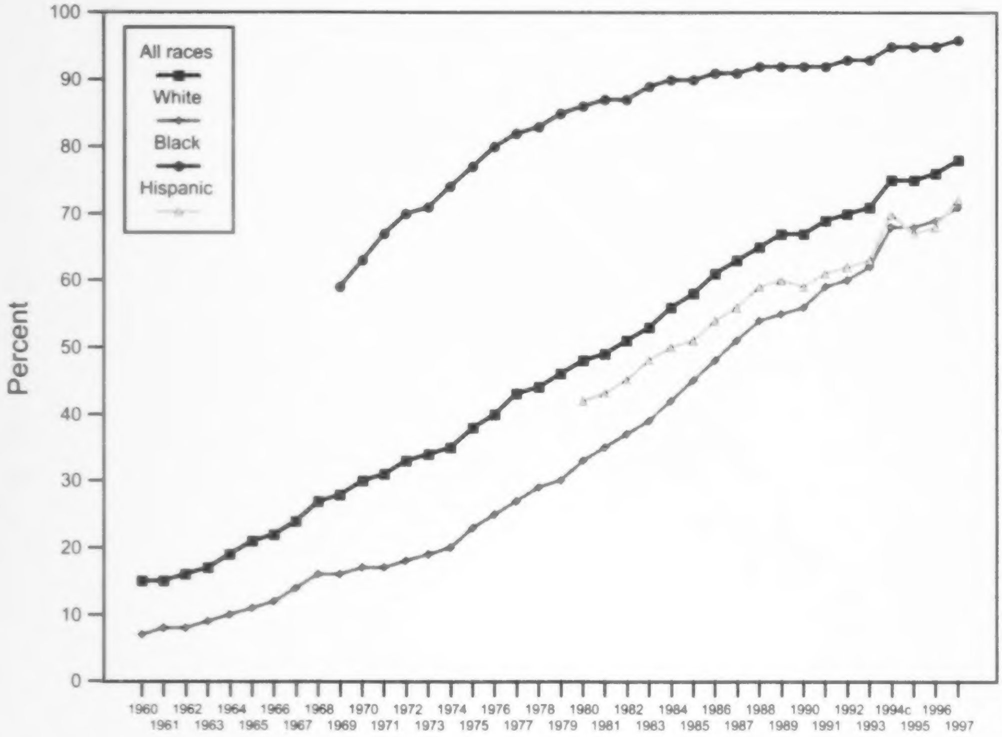
[d] Data for Hispanics have been available only since 1980, with 22 states reporting in 1980, representing 90 percent of the Hispanic population. Hispanic birth data were reported by 23 states and the District of Columbia in 1985; 48 states and the District of Columbia in 1990; 49 states and the District of Columbia in 1991 and 1992; and all 50 states and the District of Columbia since 1993.

[e] Increases between 1993 and 1994 were due primarily to improvements in the identification of nonmarital births in Texas and Michigan.

Sources: Ventura S.J. 1993. "Births to Unmarried Mothers: United States, 1980-1992." National Center for Health Statistics, *Vital and Health Statistics*, Series 21, No. 53, Table 5; Ventura, S.J. and Curtin, S.C. 1999. "Recent Trends in Teen Births in the United States." *Statistical Bulletin* 80 (1). Hyattsville, Md.: National Center for Health Statistics, Table 3; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Table 17. Venture, S.J., Mathews, T.J., Curtin, S.C. 1999. "Declines in Teenage Birth Rates, 1991-1998: Update of National and State Trends." National Vital Statistics Report 47(26). Hyattsville, Md.; National Center for Health Statistics, Table A. Also unpublished tabulations, National Center for Health Statistics.

Figure SD 4.8

Percentage of all births to unmarried women ages 15 through 19 in the United States, by race[a] and Hispanic origin:[b] 1960-1997[c]



[a] Beginning in 1980, births were tabulated by race and ethnicity of the mother. Prior to 1980, births were tabulated by race of child, assigning a child to the race of the nonwhite parent, if any, or to the race of the father, if both are nonwhite. Data for black and white births include births of Hispanic origin.

[b] Persons of Hispanic origin may be of any race. Data for Hispanics have been available only since 1980, with 22 states reporting in 1980, representing 90 percent of the Hispanic population. Hispanic birth data were reported by 23 states and the District of Columbia in 1985; 48 states and the District of Columbia in 1990; 49 states and the District of Columbia in 1991 and 1992; and all 50 states and the District of Columbia since 1993.

[c] Increases between 1993 and 1994 were due primarily to improvements in the identification of nonmarital births in Texas and Michigan.

Sources: Ventura S.J. 1995. "Births to Unmarried Mothers: United States, 1980-1992." National Center for Health Statistics, *Vital and Health Statistics* 21 (53), Hyattsville, Md.: National Center for Health Statistics, Table 5; Ventura, S.J. and Curtin, S.C. 1999. "Recent Trends in Teen Births in the United States." *Statistical Bulletin* 80 (1). Hyattsville, Md.: National Center for Health Statistics, Table 17; and Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, 1999, Table 17. Venture, S.J., Mathews, T.J., Curtin, S.C. 1999. "Declines in Teenage Birth Rates, 1991-1998: Update of National and State Trends." National Vital Statistics Report 47(26). Hyattsville, Md.; National Center for Health Statistics, Table A. Also unpublished tabulations, National Center for Health Statistics.

SD 4.9

SECOND- AND HIGHER-ORDER BIRTHS TO TEENS

Bearing a child during adolescence is associated with poor outcomes for young women and their children.[89] Giving birth to a second child while still a teen further increases these risks.[90] Yet, analyses of nationally representative data indicate that in the two years following the first birth, teen mothers have a second birth at about the same rate as older mothers.[91]

In 1998, more than one in every five births to teen mothers was a birth of second order or higher. The proportion of teen births that were second or higher order increased from 22 percent in 1980 to peak at 25 percent in 1991 but has since declined to 22 percent in 1998. This pattern is evident across racial, ethnic, and marital status groups (see Table SD 4.9). The rate of second births to teens who have had a first birth has fallen 21 percent between 1991 and 1997 (data not shown).[92]

Differences by Race and Hispanic Origin. Births to black and Hispanic teens are more likely to be subsequent births than births to white teens. In 1998, 26 percent of births to black teens, 24 percent of births to Hispanic teens, and 20 percent of births to white teens were second- or higher-order births.

Differences by Marital Status. A higher proportion of births among married teens are second or higher order than births to unmarried teens. In 1997, 28 percent of births to married teens were second or higher order, compared with 20 percent among unmarried teens.

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[89] Moore, K.A., Myers, D.E., Morrison, D.R., Nord, C.W., Brown, B.V., and Edmonston, B. 1993. "Age at First Childbirth and Later Poverty." *Journal of Research on Adolescence* 3 (4): 393-422; Maynard, R.A. (ed.). 1996. *Kids Having Kids: A Robin Hood Foundation Special Report on the Costs of Adolescent Childbearing.* New York: The Robin Hood Foundation.

[90] Kalmuss, D., and Namerow, P.B. 1992. "The Mediators of Educational Attainment among Early Childbearers." Unpublished manuscript. Columbia University, Center for Population and Family Health.

[91] Moore, K.A., Morrison, D.R., Nord, C.W., and Blumenthal, C. 1993. "The Consequences of Early Childbearing in the 1980s." Unpublished tables. Washington, D.C.: Child Trends.

[92] Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. "Births: Final Data for 1997." *National Vital Statistics Reports* 47(18). Hyattsville, Md.: National Center for Health Statistics.

Table SD 4.9

Percentage of all births to women under age 20 in the United States that are second or higher order, by marital status and by race and Hispanic origin[b] of mother: selected years, 1980-1998

	1980	1985	1991	1994	1995	1996	1997	1998
All births	22	23	25	22	21	21	22	22
Race and Hispanic origin								
White[a]	19	20	21	19	19	19	20	20
Black[a]	27	28	32	28	26	27	27	26
Hispanic[b]	20	25	26	23	23	24	24	24
Other	22	25	25	23	22	21	21	21
Marital status								
Married	24	26	28	26	26	27	28	–
Single	19	20	23	20	19	20	20	–

[a] Includes persons of Hispanic origin.

[b] Persons of Hispanic origin may be of any race.

Sources: Martin, J.A., Smith, B.L., Mathews, T.J., Ventura, S.J. 1999. "Births and Deaths: Preliminary Data for 1998." *National Vital Statistics Reports* 47(25). Hyattsville, Md.,: National Center for Health Statistics, Table 2. Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1999. "Births: Final Data for 1997." *National Vital Statistics Reports* 47 (18). Hyattsville, Md.: National Center for Health Statistics, Tables 2 and 7; Ventura, S.J., Martin, J.A., Curtin, S.C., and Mathews, T.J. 1998. "Report of Final Natality Statistics, 1996". *Monthly Vital Statistics Report* 46 (11, Supp.). Hyattsville, Md.: National Center for Health Statistics, Tables 2 and 7; also previous issues of this annual report (vol. 45, no. 11, supp., tables 2 and 6; vol. 44, no. 11, supp., tables 2 and 6; vol. 42, no. 3, supp.; vol. 36, no. 4, supp.; vol. 31, no. 8, supp., table 2 in each); also unpublished tabulations, Division of Vital Statistics, National Center for Health Statistics.

Education and Achievement

(EA)

EA 1.1

EARLY CHILDHOOD PROGRAM ENROLLMENT

Enrollment in an early childhood program is one indicator of readiness to learn in elementary school that may be especially relevant for children from disadvantaged backgrounds. One of the National Education Goals for the year 2000, adopted by Congress, is that "all children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school."[1]

In 1997, 48 percent of children ages 3 to 4 who had not yet entered kindergarten attended nursery school program (see Figure EA 1.1.A). This represents a substantial increase from the 30 percent who attended nursery school in 1980.

When a broader set of center-based programs is considered, the increase in early childhood program enrollment is even more substantial. Table EA 1.1 presents the percentage of children, ages 3 and 4, enrolled in day care centers, Head Start programs, preschools, prekindergartens, and other early childhood programs.[2] In 1996, over half (53 percent) of all 3- to 4-year-old children were enrolled in a center-based program. This reflects a modest increase from 51 percent in 1991 and 1993 (see Table EA 1.1).

Differences by Race and Hispanic Origin.[3] There are notable differences in center-based early childhood program enrollment rates among racial and ethnic groups; for example, in 1996, only 37 percent of Hispanic children were enrolled in a center-based program, compared with 54 percent of whites and 63 percent of blacks. Throughout the 1990s, black 3- to 4-year-olds have had the highest enrollments in center-based programs, followed closely by whites, with much lower enrollments among Hispanics (see Figure EA 1.1.B).

Differences by Socioeconomic Status. There are substantial differences in center-based enrollment rates by socioeconomic status, including poverty status and maternal education (see Figure EA 1.1.C).

- In 1996, enrollment rates were much higher among families that were above the poverty threshold (58 percent) than those who were at or below the poverty threshold (41 percent).
- Enrollment rates also differ by maternal education, with the highest enrollment (71 percent) among children whose mothers were college graduates and the lowest (37 percent) among children whose mothers lacked a high school diploma.

These differences by socioeconomic status were apparent for all years reported (see Table EA 1.1).

Differences by Mother's Employment Status. There are also differences in enrollment rates by maternal employment status (see Figure EA 1.1.C); for example, in 1996, children whose mothers were working either full-time (35 hours or more per week) or part-time (less than 35 hours per week) had substantially higher enrollment rates than children whose mothers were not in the labor force.

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[1] National Education Goals Panel. 1997. *The National Education Goals Report: Building a Nation of Learners, 1997* (Goal 1, p. xiv). Washington, D.C.: U.S. Government Printing Office.

[2] Estimates are based on children who have yet to enter kindergarten.

[3] Estimates for whites and blacks exclude Hispanics of those races.

Table EA 1.1

Percentage of 3- and 4-year-olds[a] in the United States enrolled in center-based programs,[b] by child and family characteristics: 1991, 1993, 1995, and 1996

	1991	1993	1995	1996
Total	51	51	53	53
Gender				
Male	51	50	52	52
Female	52	52	53	53
Race and Hispanic origin[c]				
White, non-Hispanic	53	52	55	54
Black, non-Hispanic	56	56	57	63
Hispanic	38	42	34	37
Poverty status				
At or above poverty	54	55	58	58
Below poverty	42	42	41	41
Family structure[d]				
Two parents	52	51	53	51
One or no parent	47	52	53	56
Mother's education[e]				
Less than high school	30	31	31	37
High school/GED	44	41	45	46
Vocational/technical or some college	59	58	55	55
College graduate	72	72	73	71
Mother's employment status[e]				
35 hours or more per week	58	59	58	62
Less than 35 hours per week	57	55	60	62
Not in labor force	43	43	43	41

[a] Estimates are based on children who have not yet entered kindergarten.

[b] Center-based programs include day care centers, Head Start programs, preschools, prekindergartens, and other early childhood programs.

[c] Persons of Hispanic origin may be of any race.

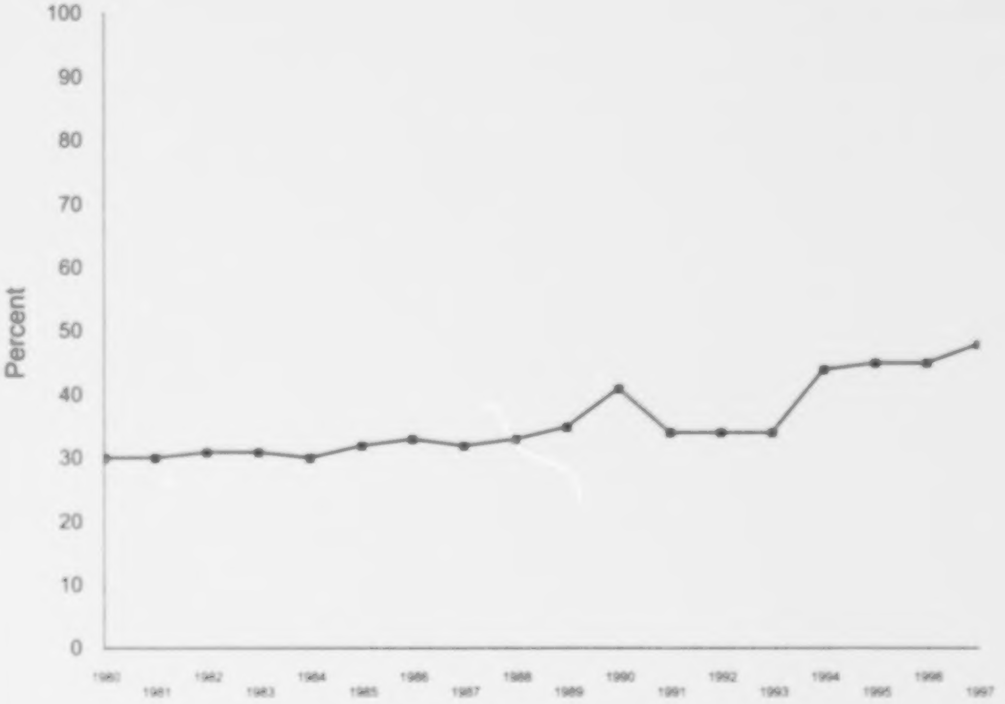
[d] Parents include any combination of a biological, adoptive, step-, and foster mother and/or father. No parents in the household indicates that the child is living with non-parent guardians (e.g., grandparents).

[e] Children without mothers in the home are not included in estimates dealing with mother's education or mother's employment status. A mother is defined as a biological mother, adoptive mother, stepmother, foster mother, or female guardian (e.g., grandmother) who resides in the home with the child.

Source: U.S. Department of Education, National Center for Education Statistics, 1991, 1993, 1995, and 1996 National Household Education Survey. As published in Federal Interagency Forum on Child and Family Statistics. 1998. *America's Children: Key National Indicators of Well-Being, 1998,* Washington, D.C: U.S. Government Printing Office, Table ED2.B.

Figure EA 1.1.A

Percentage of 3- and 4-year-olds[a] in the United States enrolled in nursery school: 1980-1997



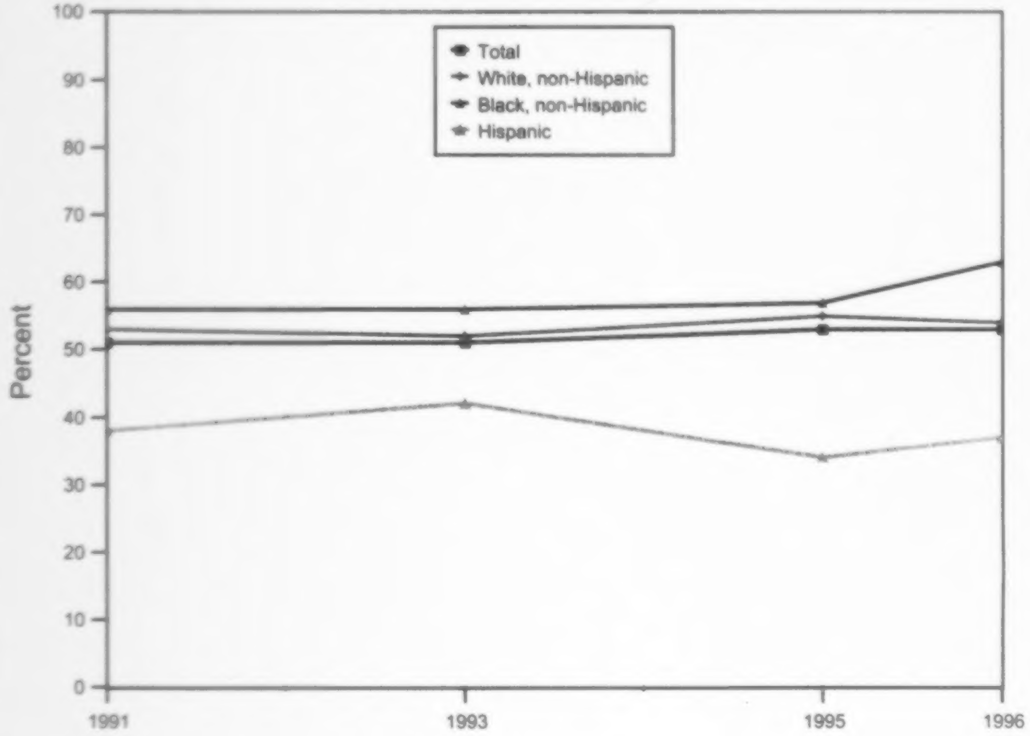
[a] Estimates are based on children who have not yet entered kindergarten.

Note: Data for 1990 and 1994-96 may not be comparable with other years because of changes in survey procedures.

Source: U.S. Bureau of the Census, October Current Population Surveys. Tabulated by the National Center for Education Statistics. As published in Federal Interagency Forum on Child and Family Statistics. 1998. *America's Children: Key National Indicators of Well-Being, 1998.* Washington, D.C.: U.S. Government Printing Office, Table ED2.A.

Figure EA 1.1.B

Percentage of 3- and 4-year-olds[a] in the United States enrolled in center-based programs[b], by race and Hispanic origin[c]: 1991, 1993, 1995, and 1996



[a] Estimates are based on children who have not yet entered kindergarten.

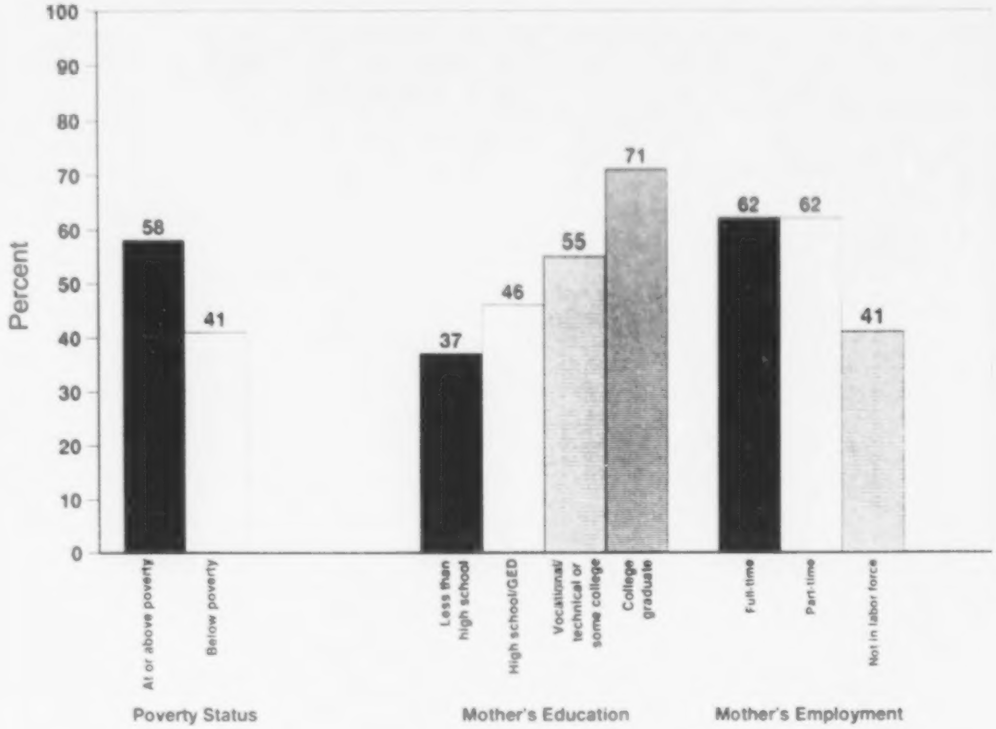
[b] Center-based programs include day care centers, Head Start programs, preschools, nursery schools, prekindergartens, and other early childhood programs.

[c] Persons of Hispanic origin may be of any race.

Source: U.S. Department of Education, National Center for Education Statistics, 1991, 1993, 1995, and 1996 National Household Education Survey. As published in Federal Interagency Forum on Child and Family Statistics. 1998. *America's Children: Key National Indicators of Well-Being, 1998.* Washington, D.C.: U.S. Government Printing Office, Table ED2.B.

Figure EA 1.1.C

Percentage of 3- and 4-year-olds[a] in the United States enrolled in center-based programs,[b] by poverty status, mother's education,[c] and mother's employment status:[c] 1996



[a] Estimates are based on children who have not yet entered kindergarten.

[b] Center-based programs include day care centers, Head Start programs, preschools, nursery schools, prekindergartens, and other early childhood programs.

[c] Children without mothers in the home are not included in estimates dealing with mother's education or mother's employment status.

Source: U.S. Department of Education, National Center for Education Statistics, 1991, 1993, 1995, and 1996 National Household Education Survey. As published in Federal Interagency Forum on Child and Family Statistics. 1998. *America's Children: Key National Indicators of Well-Being, 1998.* Washington, D.C.: U.S. Government Printing Office, Table ED2.B.

EA 1.2

GRADE RETENTION: PERCENTAGE OF CURRENT 2ND-GRADERS WHO WERE RETAINED IN KINDERGARTEN AND/OR 1ST GRADE

Children's early primary school experiences are associated with their adjustment to school and their later school success. Grade retention (repeating a grade) at an early age may indicate that a child has started school without adequate preparation and may continue to experience school problems in subsequent years. It may also measure the degree to which schools are able to respond to children from a variety of backgrounds.[4]

Table EA 1.2 presents data on the percentage of 2nd-grade students who were retained in kindergarten and/or 1st grade as reported by their parents. Estimates are presented for 1991, 1993, 1995, and 1996.[5]

Trends in Grade Retention. Data in Table EA 1.2 indicate a significant decline in the proportion of 2nd graders retained in kindergarten and/or 1st grade, from 11 percent in 1991 to 7 percent in 1996 (see Figure EA 1.2).

Differences by Gender. Boys were more likely than girls to have repeated kindergarten and/or 1st grade in 1991 and 1995 (see Table EA 1.2). For example, in 1995, 11 percent of boys were retained, compared with 5 percent of girls.

Differences by Socioeconomic Status. Grade repetition differs by family poverty status and maternal education levels. In 1995, 10 percent of 2nd-graders in poor families had repeated a grade, in comparison with 7 percent of 2nd-graders living in non-poor families (see Table EA 1.2). Grade repetition varies by maternal education, with the highest percentage of grade repetition in 1991 among children whose mothers did not complete high school (21 percent) and the lowest reported percentage among children whose mothers had attended some college or a vocational/technical school (9 percent) (see Table EA 1.2).

[4] Alexander, K.L., Entwisle, D.R., and Dauber, S.L. 1994. *On the Success of Failure: A Reassessment of the Effects of Retention in the Primary Grades.* New York: Cambridge University Press.

[5] Estimates are not presented when based on less than 30 cases in a subgroup.

Table EA 1.2

Percentage of 2nd-graders in the United States who were retained in kindergarten and/or 1st grade, by child and family characteristics: 1991, 1993, 1995, and 1996

	1991	1993	1995	1996
Total	11	8	8	7
Gender				
Male	13	10	11	8
Female	9	*	5	*
Race and Hispanic origin[a]				
White, non-Hispanic	9	7	7	6
Black, non-Hispanic	15	*	*	*
Hispanic	18	*	*	*
Poverty status[b]				
At or above poverty	9	8	7	5
Below poverty	18	*	10	*
Family structure[c]				
Two parents	10	7	8	5
One or no parent	14	11	9	*
Mother's education[d]				
Less than high school	21	*	*	*
High school/GED	12	9	9	*
Vocational/technical or some college	9	*	7	*
College graduate	*	*	*	*
Mother's employment status[d]				
35 hours or more per week	12	8	9	*
Less than 35 hours per week	8	*	*	*
Not in labor force	11	*	8	*

* = sample size is insufficient to permit a reliable estimate.

[a] Persons of Hispanic origin may be of any race.

[b] The poverty threshold for 1995 and 1996 data was calculated using the total number of household members and estimates of household income to the nearest $1,000 either alone or in combination with *exact* income information. The 1995 and 1996 poverty calculations differ from calculations in other years (1991 and 1993), which were based on total number of household members and estimates of household income (in increments of $5,000 or $1,000) only. Calculations for all years do not account for the number of children in the household.

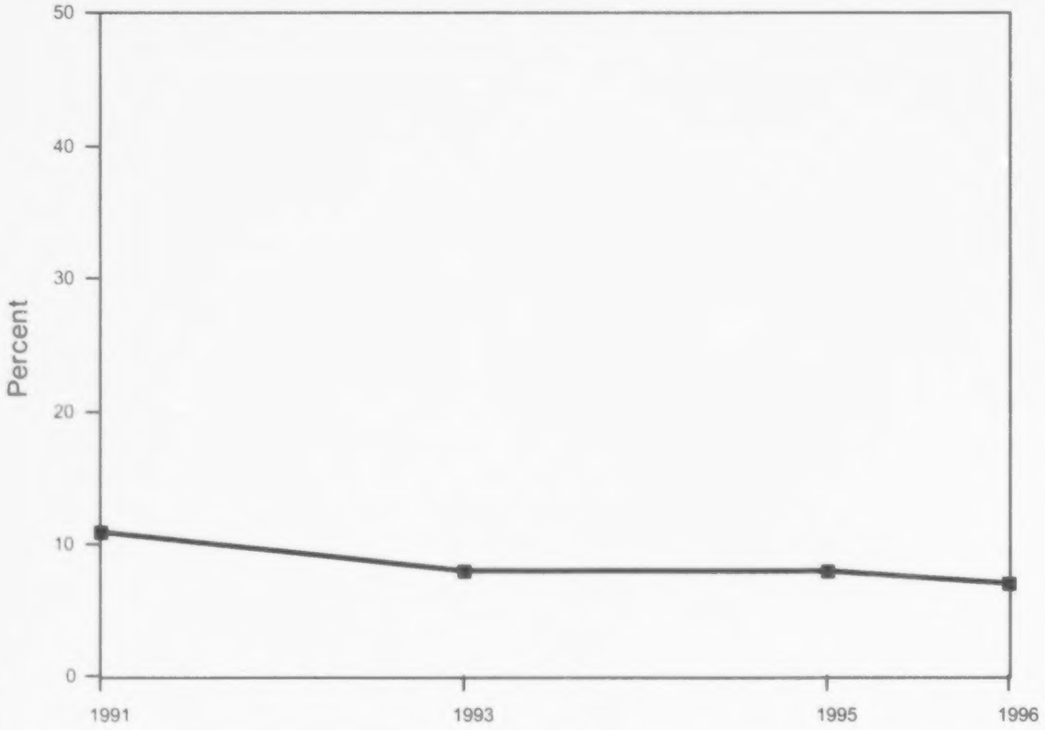
[c] Parents include any combination of a biological, adoptive, step-, and foster mothers and/or fathers. No parents in the household indicates that the child is living with non-parent guardians (e.g., grandparents).

[d] Children without mothers in the home are not included in estimates dealing with mother's education or mother's employment status. A mother is defined as a biological mother, adoptive mother, stepmother, foster mother, or female guardian (e.g., grandmother) who resides in the home with the child.

Source: U.S. Department of Education, National Center for Education Statistics, 1991, 1993, 1995, and 1996 National Household Education Surveys. Tabulations of data performed by U.S. Department of Education, National Center for Education Statistics (unpublished).

Figure EA 1.2

Percentage of 2nd-graders in the United States who were retained in kindergarten and/or 1st grade: selected years, 1991-1996



Source: U.S. Department of Education, National Center for Education Statistics, 1991, 1993, 1995, and 1996 National Household Education Surveys. Tabulations performed by National Center for Education Statistics.

EA 1.3

SCHOOL ABSENTEEISM

Student absenteeism is associated with poor achievement in school, among other outcomes; for example, absenteeism is one of five personal and family background factors that accounted for 91 percent of the variation in states' mathematics scores in a recent national report.[6]

Differences across Grade Levels. The percentage of 8th-grade students who were absent from school three or more days in the preceding month has remained relatively constant at around 23 percent between 1990 and 1996 (see Table EA 1.3). During the same time period, a slightly larger percentage of 12th-grade students were absent from school for that length of time, with percentages ranging between 26 and 31 percent.

Differences by Race and Hispanic Origin.[7] Among 8th-graders in 1996, American Indian and Hispanic students, at 29 percent, were the most likely to have been absent three or more days in the preceding month. White and Asian students had the lowest absentee rates at 21 and 18 percent, respectively, followed by black students at 25 percent. The patterns are similar for 12th-grade students, though the differences range from lows of 26 to 28 percent for white, Asian, and black students, to a high of 30 percent for American Indians.

Differences by Parents' Education Level.[8] Absences from school were highest for students whose better-educated parent has less than a high school education (see Figure EA 1.3). In 1996, for example, 32 percent of 8th-graders whose better-educated parent lacked a high school diploma were absent from school three or more days in the preceding month, compared with 18 percent of their peers who had at least one parent with a college degree. Similar differences were reported for 12th-grade students.

Differences by Type of School. Students who attended private or Catholic schools experienced fewer school absences than did students from public schools, across all grades and years (see Table EA 1.3).

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[6] National Education Goals Panel. 1994. *The National Education Goals Report: Building a Nation of Learners, 1994.* Washington, D.C.: U.S. Government Printing Office.

[7] Estimates for whites and blacks exclude Hispanics of those races.

[8] Parents' education level refers to the highest level of education completed by either parent.

Table EA 1.3

Percentage of 8th- and 12th-grade students in the United States who were absent from school three or more days in the preceding month, by gender, race and Hispanic origin,[a] parents' education level,[b] and type of school: 1990, 1992, 1994, and 1996

	8th Grade				12th Grade			
	1990	1992	1994	1996	1990	1992	1994	1996
Total	23	22	22	23	31	26	28	26
Gender								
Male	21	21	22	22	29	24	27	25
Female	24	24	22	23	32	27	28	28
Race and Hispanic origin[a]								
White, non-Hispanic	22	21	20	21	31	24	26	26
Black, non-Hispanic	23	22	27	25	30	29	32	28
Hispanic	26	31	28	29	34	32	32	29
Asian/Pacific Islander	9	12	21	18	32	19	28	26
American Indian/Alaskan Native	37	38	39	29	*	*	53	30
Parents' education level[b]								
Less than high school	38	31	33	32	41	30	36	35
Graduated high school	27	23	26	26	34	28	30	30
Some education after high school	22	21	22	23	31	26	27	30
Graduated college	15	19	18	18	27	23	25	21
Type of school								
Public	23	23	23	23	31	27	28	28
Nonpublic	13	14	15	16	24	17	21	18

* = sample size is insufficient to permit a reliable estimate.

[a] Persons of Hispanic origin may be of any race.

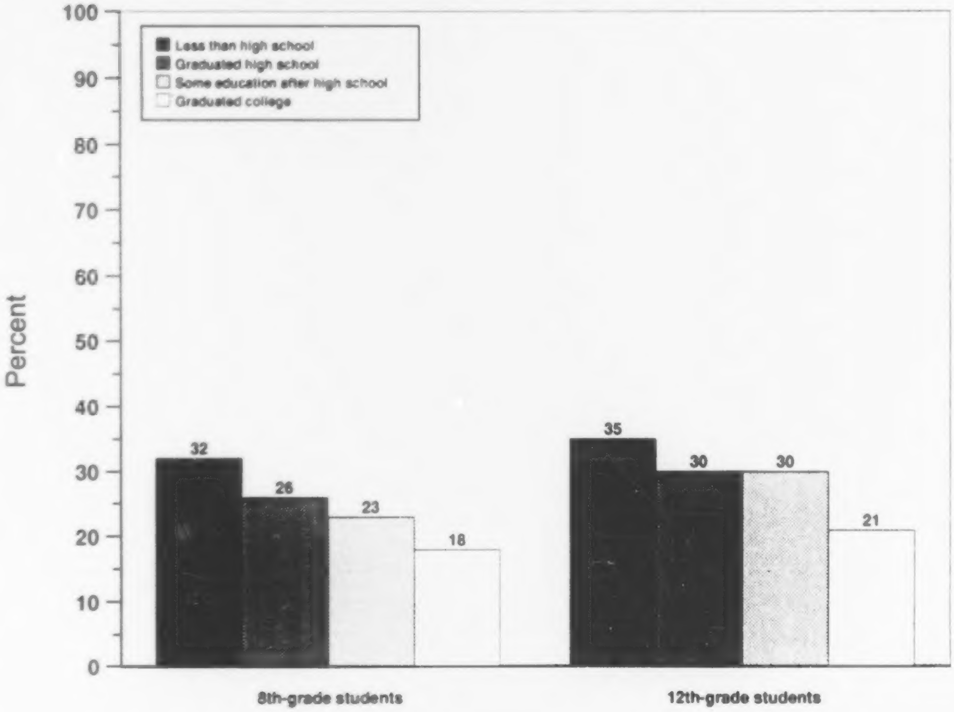
[b] Parents' education level refers to the highest level of education completed by either parent.

Note: The sample for this table is based on the 1990, 1992, and 1996 National Mathematics Assessments and the 1994 National Reading Assessment.

Sources: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1994, and 1996 *Data Almanacs.* National Mathematics Assessment data may be found at http://nces.ed.gov/naep/tables96/index.html (Question #15, S004001). National Reading Assessment data (1994) are from unpublished data almanacs.

Figure EA 1.3

Percentage of 8th- and 12th-grade students in the United States who were absent from school three or more days in the preceding month, by parents' education level:[a] 1996



[a] Parents' education level refers to the highest level of education completed by either parent.

Note: The data for this figure come from the 1996 National Mathematics Assessment.

Sources: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1990, 1992, 1994, and 1996 *Data Almanacs*. National Mathematics Assessment data may be found at http://nces.ed.gov/naep/tables96/index.html (Question #15, S004001). National Reading Assessment data (1994) are from unpublished data almanacs.

EA 1.4

HIGH SCHOOL DROPOUTS: EVENT DROPOUT RATE[9] FOR GRADES 10 THROUGH 12

High school dropouts have lower earnings, experience more unemployment, and are more likely to end up on welfare than their peers who complete high school or college.[10] Women who drop out of high school are more likely to become pregnant and give birth at a young age and are more likely to become single parents.[11]

Table EA 1.4 shows the event dropout rate (percentage) for students in grades 10 through 12, ages 15 through 24. Event dropout rates are measured by the proportion of students enrolled in grades 10 through 12 one year earlier who were not enrolled and who had not completed high school in the year the data are reported. From 1975 to 1997, dropout rates fluctuated between 4 percent and 7 percent.[12] While the event dropout rate appears higher in recent years, the observed differences may be due to changes in census methodology. As shown in Table EA 1.4, there are no consistent differences in dropout rates by gender.

Differences by Race and Hispanic Origin.[13] In 1997, Hispanics had a higher dropout rate (10 percent) than whites (4 percent) or blacks (5 percent) (see Figure EA 1.4).[14]

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[9] *Event* dropout rates describe the proportion of students who leave school each year without completing a high school program. This is in contrast to *status* dropout rates, which provide cumulative data on dropouts among all young adults within a specified age range, and *cohort* dropout rates, which follow a particular cohort of students over time (McMillen and Kaufman, 1997).

[10] U.S. Department of Education, National Center for Education Statistics. 1998. *The Condition of Education: 1998.* NCES 98-013. Indicators 31, 32, and 34. Washington, D.C.: U.S. Government Printing Office.

[11] Marin, M.M., Chan, N, and Raymond, J. 1987. "Consequences of the Process of Transition to Adulthood for Adult Economic Well Being." In R.G. Corin (ed.) Research in the Sociology of Education and Socialization. Greenwich, CT: JAI; Manlove, J. 1998. "The Influence of High School Dropout and School Disengagement on the Risk of School-Age Pregnancy." *Journal of Research on Adolescence* 8: 187-220.

[12] The event dropout rate reached 7 percent in the years 1974, 1977, 1978, and 1979. Data for these years are not shown in Table EA 1.4.

[13] Estimates for whites and blacks exclude Hispanics of those races.

[14] The finding that Hispanics are more at risk of dropping out of school than either blacks or whites has been confirmed in other national data sets, such as High School and Beyond and the National Education Longitudinal Study (Ekstron, R., Goertz, M., Pollack, J., and Rock, D. 1987. "Who Drops out of High School and Why? Findings from a National Study." In G. Natriello (ed.), *School Dropouts: Patterns and Policies* (pp. 52-69). New York: Teachers College Press; McMillen, M., and Kaufman, P. 1994. *Dropout Rates in the United States: 1994.* NCES 96-863. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics).

Table EA 1.4

Event dropout rate[a] (percentage) for youth in the United States in grades 10 through 12 (ages 15 through 24), by gender and by race and Hispanic origin:[b] selected years, 1975-1997

	1975	1980	1985	1990[c]	1991[c]	1992[c,d]	1993[c,d]	1994[c,d,e]	1995[c,d]	1996[c,d]	1997[c,d,e]
Total	6	6	5	4	4	4	5	5	6	5	5
Male	5	7	5	4	4	4	5	5	6	5	5
Female	6	6	5	4	4	5	4	5	5	5	4
White, non-Hispanic											
Total	5	5	4	3	3	4	4	4	5	4	4
Male	5	6	5	4	3	4	4	4	5	4	—
Female	5	5	4	3	4	4	4	4	4	4	—
Black, non-Hispanic											
Total	9	8	8	5	6	5	6	7	6	7	5
Male	8	8	8	4	5	3	6	7	8	5	—
Female	9	9	7	6	7	7	5	6	5	9	—
Hispanic[b]											
Total	11	12	10	8	7	8	7	10	12	9	10
Male	10	18	9	9	10	8	5	9	12	10	—
Female	12	7	10	7	5	9	8	11	13	8	—

[a] The event dropout rate is the proportion of students enrolled in grades 10 through 12 one year earlier who were not enrolled and not graduated in the year for which the data are presented.

[b] Persons of Hispanic origin may be of any race.

[c] Numbers for these years reflect new editing procedures instituted by the Bureau of the Census for cases with missing data on school enrollment items.

[d] Numbers for these years reflect new wording of the educational attainment item in the Current Population Survey (CPS).

[e] Numbers in this year may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls to the 1990 Census-based estimates, with adjustments for undercount.

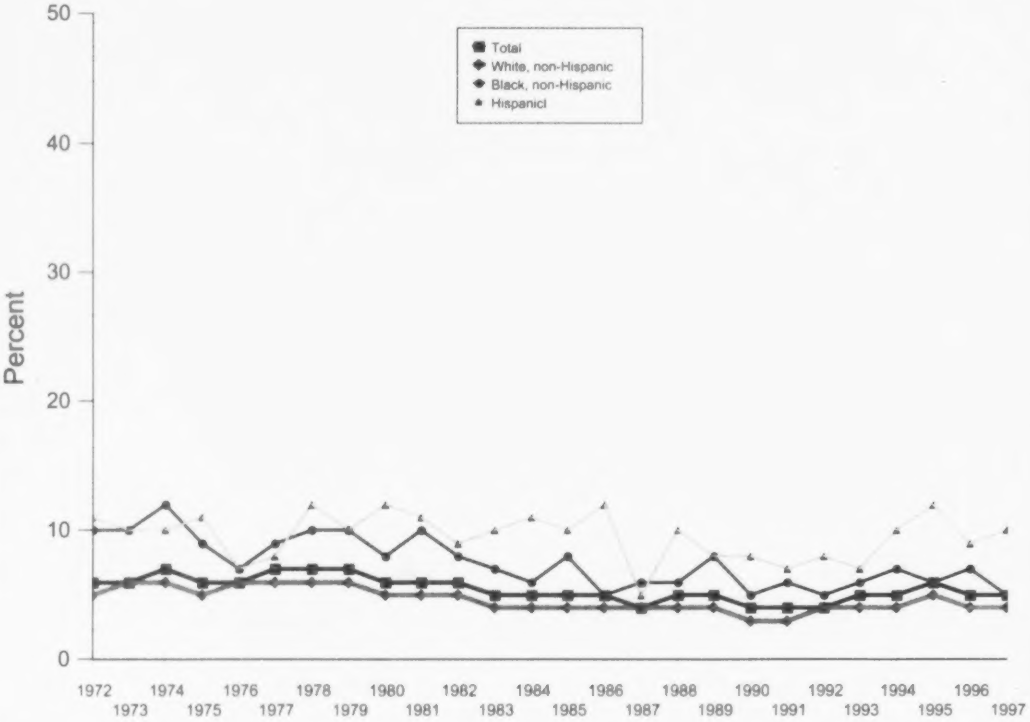
— = not available

Note: Event dropout rates are calculated using the Current Population Survey data from October of a given year.

Sources: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, unpublished tabulations; U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1996*, Table A19, and *Dropout Rates in the United States: 1997*, Table B3.

Figure EA 1.4

Event dropout rate for youth in the United States in grades 10 through 12 (ages 15 through 24), by race and Hispanic origin:[a] selected years, 1972-1997



[a] Persons of Hispanic origin may be of any race.

Note: The event dropout rate is the proportion of students enrolled in grades 10 through 12 one year earlier who were not enrolled and not graduated in the year for which the data are presented.

Sources: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October (various years), unpublished tabulations; U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1997*, Table B3

EA 1.5

HIGH SCHOOL COMPLETION RATES FOR 18- THROUGH 24-YEAR-OLDS

High school graduates earn substantially more than persons who leave high school without graduating.[15] Table EA 1.5 presents the high school completion rates for 18- through 24-year-olds who were not still enrolled in a high school program—i.e., the percentage in this age group who have received a high school diploma or its equivalent, such as passing the General Educational Development (GED) exam. In 1997, the high school completion rate was 86 percent. As can be seen in Table EA 1.5, most students receive a high school diploma rather than an equivalent credential (77 percent versus 9 percent, respectively), though the equivalency credential has become more common in recent years. Between 1972 and 1997, the completion rate has varied between 83 percent and 86 percent (see Table EA 1.5).

Differences by Race and Hispanic Origin.[16] As Figure EA 1.5 shows, completion rates vary dramatically by race and Hispanic origin. Hispanics have had much lower high school completion rates than either blacks or whites since the early 1980s. The high school completion rate for Hispanics in 1997 was only 67 percent, compared with 82 percent for blacks and 91 percent for whites. This suggests that many Hispanic youth and young adults will be less prepared than other 18- through 24-year-olds to enter or progress in the labor force.

While completion rates for blacks and Hispanics rose significantly between 1972 and 1985, the 1997 completion rates for both groups are not significantly different from the 1985 rates. The completion rate for blacks rose from 72 percent in 1972 to 81 percent in 1985, and it has remained at about that level through 1997 (see Table EA 1.5). The completion rate for Hispanics rose from 56 percent in 1972 to 67 percent in 1985 and stands at 67 percent in 1997, as well. The completion rate has also increased among whites, but to a lesser extent (see Figure EA 1.5).

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[15] U.S. Bureau of the Census. 1997. *Current Population Reports, P60-197. Money Income in the United States: 1996, With Separate Data on Valuation of Noncash Benefits,* Table 7. Washington, D.C.: U.S. Government Printing Office; U.S. Department of Education, National Center for Education Statistics. 1996. *Condition of Education* 1996 (Indicators 32 and 34). Washington, D.C.: U.S. Government Printing Office.

[16] Estimates for whites and blacks exclude Hispanics of those races.

Table EA 1.5

High school completion rates (percentage) and method of completion for 18- through 24-year-olds[a] in the United States, by race and Hispanic origin:[b] selected years, 1972-1997

Completion method	1972	1975	1980	1985	1990	1991	1992[c]	1993[c]	1994[c,d]	1995[c,d]	1996[c,d]	1997[c,d]
Total												
Completed	83	84	84	85	86	85	86	86	86	85	86	86
Diploma	—	—	—	—	81	81	81	81	79	78	76	77
Equivalent[e]	—	—	—	—	5	4	5	5	7	8	10	9
White, non-Hispanic												
Completed	86	87	88	88	90	89	91	90	91	90	92	91
Diploma	—	—	—	—	85	85	86	86	84	83	81	81
Equivalent[e]	—	—	—	—	5	4	5	5	6	7	11	9
Black, non-Hispanic												
Completed	72	70	75	81	83	83	82	82	83	85	83	82
Diploma	—	—	—	—	78	77	76	76	75	75	73	72
Equivalent[e]	—	—	—	—	5	5	6	6	8	9	10	10
Hispanic[b]												
Completed	56	62	57	67	59	57	62	64	62	63	62	67
Diploma	—	—	—	—	55	53	57	58	54	54	55	59
Equivalent[e]	—	—	—	—	4	3	6	6	8	9	7	8

[a] Refers to persons not currently enrolled in high school or below.

[b] Persons of Hispanic origin may be of any race.

[c] Numbers for these years reflect new wording of the educational attainment item in the Current Population Survey (CPS).

[d] Numbers for these years may reflect changes in CPS due to newly instituted computer-assisted interviewing and/or due to the change in the population controls used this year to the 1990 Census-based estimates, with adjustments for undercount.

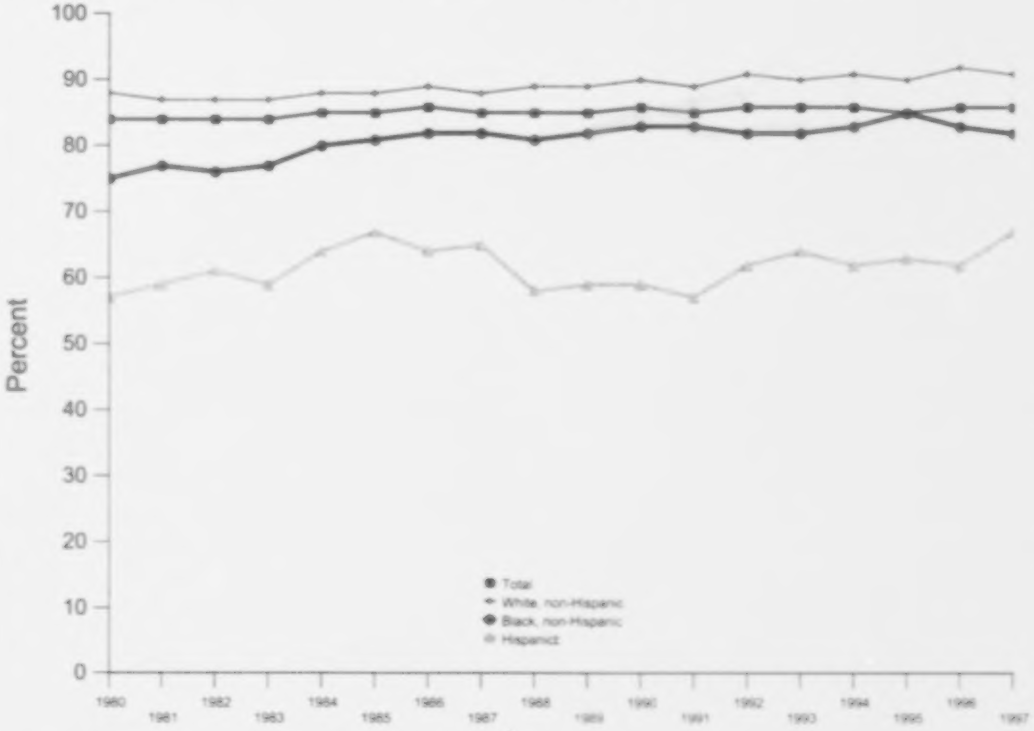
[e] Diploma equivalents include passing the General Educational Development (GED) exam.

Note: High school completion rates are calculated using the Current Population Survey data from October of a given year.

Sources: U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1996*, Tables 13 and A25, and *Dropout Rates in the United States: 1997*, Table 4.

Figure EA 1.5

High school completion rates for 18- through 24-year-olds[a] in the United States, by race and Hispanic origin:[b] selected years, 1980-1997



[a] Refers to persons not currently enrolled in high school or below.

[b] Persons of Hispanic origin may be of any race.

Sources: U.S. Department of Education, National Center for Education Statistics, *Dropout Rates in the United States: 1996*, Table A25, and *Dropout Rates in the United States: 1997*, Table 4.

EA 1.6

COLLEGE ATTENDANCE AND ATTAINMENT

College attendance and receipt of a bachelor's degree increase employment opportunities and income potential. One of the National Education Goals for the year 2000, adopted by Congress, is for adult literacy and lifelong learning, with an objective of increasing the proportion of qualified students, especially minorities, who enter college, who complete at least two years, and who complete their degree programs.[17]

Table EA 1.6 presents the percentage of 25- through 29-year-old high school graduates who had completed at least some college and the percentage who had received a bachelor's degree or higher:[18]

- In 1997, 65 percent of high school graduates in this age group had completed at least some college, 9 percent had received an associate's degree, and 32 percent had received at least a bachelor's degree.[19]
- College attendance has increased since the early 1970s, with the most rapid increases occurring during the 1990s. The percentage of high school graduates completing at least some college rose from 44 percent in 1971 to 52 percent in 1990—and then to 65 percent in 1997 (see Figure EA 1.6.A).
- College completion, defined here as receipt of a bachelor's degree, increased more modestly, from 22 percent of 25- to 29-year-old high school graduates in 1971 to 32 percent of this group in 1997 (see Figure EA 1.6.B).

Differences by Race and Hispanic Origin.[20] In 1997, white high school graduates were far more likely (35 percent) than their black (16 percent) or Hispanic peers (18 percent) to have received a bachelor's degree or higher. Whites were also more likely to have attended college (68 percent) than blacks or Hispanics (54 percent) in 1997. Whites have had far higher rates of attendance and completion than blacks or Hispanics since the early 1970s, and the gap between whites and the other two racial/ethnic groups in college attendance and completion has not decreased over time (see Figures EA 1.6.A and EA 1.6.B).

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[17] National Education Goals Panel. 1997. *The National Education Goals Report: Building a Nation of Learners, 1997* (Goal 6, p. xvi). Washington, D.C.: U.S. Government Printing Office.

[18] Note that the measure of college attendance changed from "one or more years of college" in 1971-1991 to "some college or more" in 1992-1997. Similarly, the measure of college completion changed from "four or more years of college" in 1971-1991 to "bachelor's degree or higher" in 1992-1997.

[19] Based on analyses of the 1993 Baccalaureate and Beyond Longitudinal study, it is estimated that about 10 percent of all persons with a bachelor's degree also hold an associate's degree. National Center for Education Statistics.

[20] Estimates for whites and blacks exclude Hispanics of those races.

Table EA 1.6

Percentage of 25- through 29-year-old high school graduates[a] in the United States who have attended some college or who have received a bachelor's degree or higher, by race and Hispanic origin:[b] selected years, 1971-1997

	1971	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Some college or more[c]												
Total	44	50	52	51	52	53	57	59	61	62	65	65
Race and Hispanic origin[b]												
White, non-Hispanic	45	51	54	52	54	55	59	61	63	65	67	68
Black, non-Hispanic	31	39	42	43	44	43	45	48	50	52	56	54
Hispanic	31	41	40	44	40	42	47	49	52	50	51	54
Bachelor's degree or higher[d]												
Total	22	26	26	26	27	27	27	27	27	28	31	32
Race and Hispanic origin[b]												
White, non-Hispanic	23	28	28	27	29	30	30	30	30	31	34	35
Black, non-Hispanic	12	15	15	14	16	13	14	16	16	18	17	16
Hispanic	11	17	13	18	14	16	16	14	13	16	16	18
Associate's degree												
Total	—	—	—	—	—	—	8	9	10	10	10	9
Race and Hispanic origin[b]												
White, non-Hispanic	—	—	—	—	—	—	8	9	10	10	10	9
Black, non-Hispanic	—	—	—	—	—	—	8	6	8	8	8	7
Hispanic	—	—	—	—	—	—	7	8	9	7	8	9

— = not available

[a] High school completion or high school graduate is defined as 12 years of school completed for 1971-1991 and high school diploma or equivalency certificate for 1992-1997. Beginning in 1992, the Current Population Survey (CPS) changed the questions used to obtain educational attainment of respondents.

[b] Persons of Hispanic origin may be of any race.

[c] This was measured as "one or more years of college" for 1971-1991 and as "some college or more" for 1992-1997.

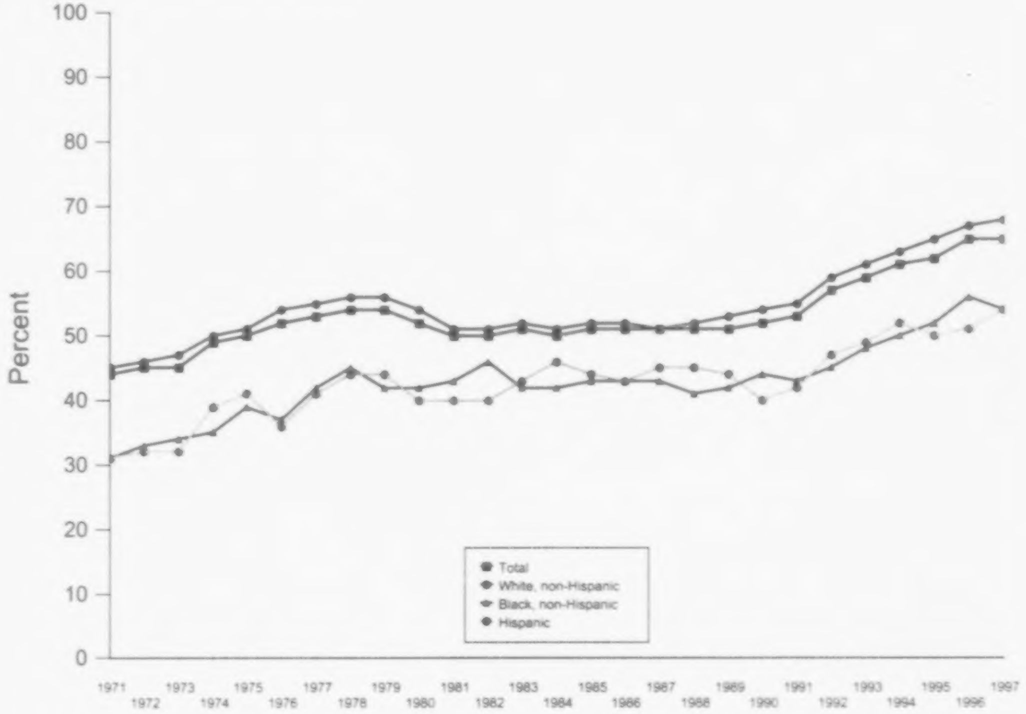
[d] This was measured as "four or more years of college" for 1971-1991 and as "bachelor's degree or higher" for 1992-1997.

Note: Based on analyses of the 1993 Baccalaureate and Beyond Longitudinal study, it is estimated that about 10 percent of all persons with a bachelor's degree also hold an associate's degree. National Center for Education Statistics.

Sources: U.S. Department of Education, National Center for Education Statistics. 1998. *The Condition of Education 1997.* Washington, D.C.: U.S. Government Printing Office, Tables 22-2 and 22-3. Associate degree data published in Federal Interagency Forum on Child and Family Statistics. 1998. *America's Children: Key National Indicators of Well-Being, 1998.* Washington, D.C.: U.S. Government Printing Office, Table ED6.

Figure EA 1.6.A

Percentage of 25- through 29-year-old high school graduates[a] in the United States who have attended some college,[b] by race and Hispanic origin:[c] selected years, 1971-1997



[a] High school completion or high school graduate is defined as 12 years of school completed for 1971-1991 and high school diploma or equivalency certificate for 1992-1997. Beginning in 1992, the Current Population Survey (CPS) changed the questions used to obtain the educational attainment of respondents.

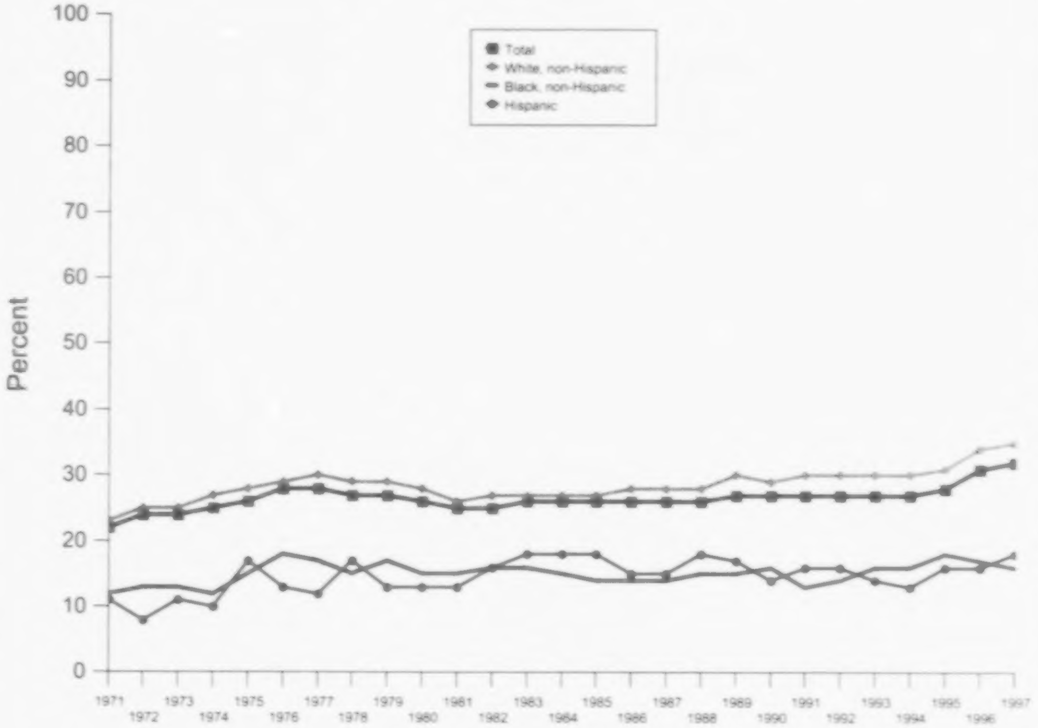
[b] This was measured as "one or more years of college" for 1971-1991 and as "some college or more" for 1992-1997.

[c] Persons of Hispanic origin may be of any race.

Source: U.S. Department of Education, National Center for Education Statistics. 1998. *The Condition of Education 1997.* Washington, D.C.: U.S. Government Printing Office (based on March Current Population Surveys, U.S. Bureau of the Census), Table 22-2.

Figure EA 1.6.B

Percentage of 25- through 29-year-old high school graduates[a] in the United States who have received a bachelor's degree,[b] by race and Hispanic origin:[c] selected years, 1971-1997



[a] High school completion or high school graduate is defined as 12 years of school completed for 1971-1991 and high school diploma or equivalency certificate for 1992-1997. Beginning in 1992, the Current Population Survey (CPS) changed the questions used to obtain the educational attainment of respondents.

[b] This was measured as "four or more years of college" for 1971-1991 and as "bachelor's degree or higher" for 1992-1997.

[c] Persons of Hispanic origin may be of any race.

Source: U.S. Department of Education, National Center for Education Statistics. 1998. *The Condition of Education 1997.* Washington, D.C.: U.S. Government Printing Office, Table 22-3.

EA 2.1

READING PROFICIENCY FOR CHILDREN AGES 9, 13, AND 17

Literacy proficiency and reading achievement are vital to educational reform efforts in the United States.[21] One of the National Education Goals for the year 2000, adopted by Congress, is for adult literacy and lifelong learning, with objectives of having all students demonstrate competency in English and having all adults be literate.[22] Levels of reading achievement will help measure the extent to which these goals are being met.

In order to monitor progress in the reading achievement of students in the United States, the National Assessment of Educational Progress (NAEP) has conducted national assessments of the reading performance of 9-, 13-, and 17-year-olds. There are five levels of reading proficiency reported by NAEP, ranging from Level 150 (completing simple, discrete reading tasks) to Level 350 (learning from specialized reading materials).[23] The following tables report the average reading proficiency scores of students in the three age groups between 1971 and 1996.

Trends in Reading Proficiency Scores. Among 9-year-olds, average reading proficiency scores improved between 1971 and 1980, declined between 1980 and 1984, and remained steady until 1996, so that the average score in 1996 (212) was similar to the score in 1975 (210) (see Table EA 2.1.A). Among 13-year-olds, average reading proficiency scores varied from year to year and were similar in 1996 (259) and 1971 (255) (see Table EA 2.1.B). Among 17-year-olds, average scores increased between 1971 and 1988, remained stable between 1988 and 1992, and then showed a slight decline through 1996, so that the average score in 1996 (287) was similar to the score in 1975 (286) (see Table EA 2.1.C).

Differences by Gender. Females have scored consistently higher than males over time and for all ages. For example, among 13-year-olds in 1996, females had an average score of 265, compared with an average score of 253 for males (see Table EA 2.1.B).

Differences by Race and Hispanic Origin.[24] There are large and consistent differences in reading proficiency by race and Hispanic origin among all age groups; for example, among 17-year-olds in 1996, whites had higher average reading proficiency scores (294) than either blacks (265) or Hispanics (265) (see Table EA 2.1.C). However, black 17-year-olds had especially high gains in achievement relative to whites in the 1980s; thus, the gaps in reading proficiency scores between whites and blacks have narrowed since the mid-1970s among 17-year-olds (see Figure EA 2.1). The gap has also narrowed between white and Hispanic 17-year-olds (see Figure EA 2.1).

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[21] Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics.

[22] National Education Goals Panel. 1997. *The National Education Goals Report: Building a Nation of Learners, 1997* (Goal 6, p. xvi). Washington, D.C.: U.S. Government Printing Office.

[23] NAEP has regularly been conducting assessments of students in public and private schools in the United States in order to monitor trends in academic achievement in core curriculum areas since the 1970s. NAEP uses proficiency scales that range from 0 to 500. To give meaning to the results, students' performance is characterized at five levels along the proficiency scales (150, 200, 250, 300, 350).

[24] Estimates for whites and blacks exclude Hispanics of those races.

Differences by Parents' Education Level.[25] Average reading proficiency levels vary dramatically by parents' education level;[26] for example, among 13-year-olds and 17-year-olds in 1996, the lowest average reading proficiency scores were among teens whose better-educated parent did not have a high school education, while the highest scores were among teens who had a parent with post-high school education. In fact, the average reading proficiency score among 13-year-old children of parents with post-high school education levels (270) was similar to the average score among 17-year-old children of parents without a high school degree (267) (see Tables EA 2.1.B and EA 2.1.C).

Differences by Type of School. Average reading proficiency scores have been consistently higher among students attending nonpublic schools than among students attending public schools. This is true for every age group and every year reported (see Tables EA 2.1.A, EA 2.1.B, and EA 2.1.C).

[25] Parents' education level refers to the highest level of education completed by either parent.

[26] Parents' education level is not reported at age 9 because approximately one-third of these students did not know their parents' education level.

Table EA 2.1.A

Average reading proficiency for children age 9 in the United States, by gender, race and Hispanic origin,[a] and type of school: selected years, 1971-1996

	1971	1975	1980	1984	1988	1990	1992	1994	1996
Total	208	210	215	211	212	209	211	211	212
Gender									
Male	201	204	210	208	208	204	206	207	207
Female	214	216	220	214	216	215	215	215	218
Race and Hispanic origin[a]									
White, non-Hispanic	214	217	221	218	218	217	218	218	220
Black, non-Hispanic	170	181	189	186	189	182	185	185	190
Hispanic	—	183	190	187	194	189	192	186	194
Type of school									
Public	—	—	214	209	210	208	209	209	210
Nonpublic	—	—	227	223	223	228	225	225	227

— = not available

[a] Persons of Hispanic origin may be of any race.

Note: The reading proficiency scale ranges from 0 to 500:

Level 150: Simple, discrete reading tasks

Level 200: Partial skills and understanding

Level 250: Interrelates ideas and makes generalizations

Level 300: Understands complicated information

Level 350: Learns from specialized reading materials

Source: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics, Table C.16.

Table EA 2.1.B

Average reading proficiency for children age 13 in the United States, by gender, race and Hispanic origin,[a] parents' education level,[b] and type of school: selected years, 1971-1996

	1971	1975	1980	1984	1988	1990	1992	1994	1996
Total	255	256	259	257	258	257	260	258	259
Gender									
Male	250	250	254	253	252	251	254	251	253
Female	261	262	263	262	263	263	265	266	265
Race and Hispanic origin[a]									
White, non-Hispanic	261	262	264	263	261	262	266	265	267
Black, non-Hispanic	222	226	233	236	243	242	238	234	236
Hispanic	—	233	237	240	240	238	239	235	240
Parents' education level[b]									
Less than high school	238	239	239	240	247	241	239	237	241
Graduated high school	256	255	254	253	253	251	252	251	252
Some education after high school	270	270	271	268	265	267	270	269	270
Type of school									
Public	—	—	257	255	256	255	257	256	257
Nonpublic	—	—	271	271	268	270	276	276	274

— = not available

[a] Persons of Hispanic origin may be of any race.

[b] Parents' education level refers to the highest level of education completed by either parent.

Note: The reading proficiency scale ranges from 0 to 500:

Level 150: Simple, discrete reading tasks

Level 200: Partial skills and understanding

Level 250: Interrelates ideas and makes generalizations

Level 300: Understands complicated information

Level 350: Learns from specialized reading materials

Source: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics, Table C.17.

Table EA 2.1.C

Average reading proficiency for children age 17 in the United States, by gender, race and Hispanic origin,[a] parents' education level,[b] and type of school: selected years, 1971-1996

	1971	1975	1980	1984	1988	1990	1992	1994	1996
Total	285	286	286	289	290	290	290	288	287
Gender									
Male	279	280	282	284	286	284	284	282	280
Female	291	291	289	294	294	297	296	295	294
Race and Hispanic origin[a]									
White, non-Hispanic	291	293	293	295	295	297	297	296	294
Black, non-Hispanic	239	241	243	264	274	267	261	266	265
Hispanic	—	252	261	268	271	275	271	263	265
Parents' education level[b]									
Less than high school	261	263	262	269	267	270	271	268	267
Graduated high school	283	281	278	281	282	283	281	276	273
Some education after high school	302	301	299	301	300	300	299	299	297
Type of School									
Public	—	—	284	287	289	289	288	286	286
Nonpublic	—	—	298	303	300	311	310	306	294

— = not available

[a] Persons of Hispanic origin may be of any race.

[b] Parents' education level refers to the highest level of education completed by either parent.

Note: The reading proficiency scale ranges from 0 to 500:

Level 150: Simple, discrete reading tasks

Level 200: Partial skills and understanding

Level 250: Interrelates ideas and makes generalizations

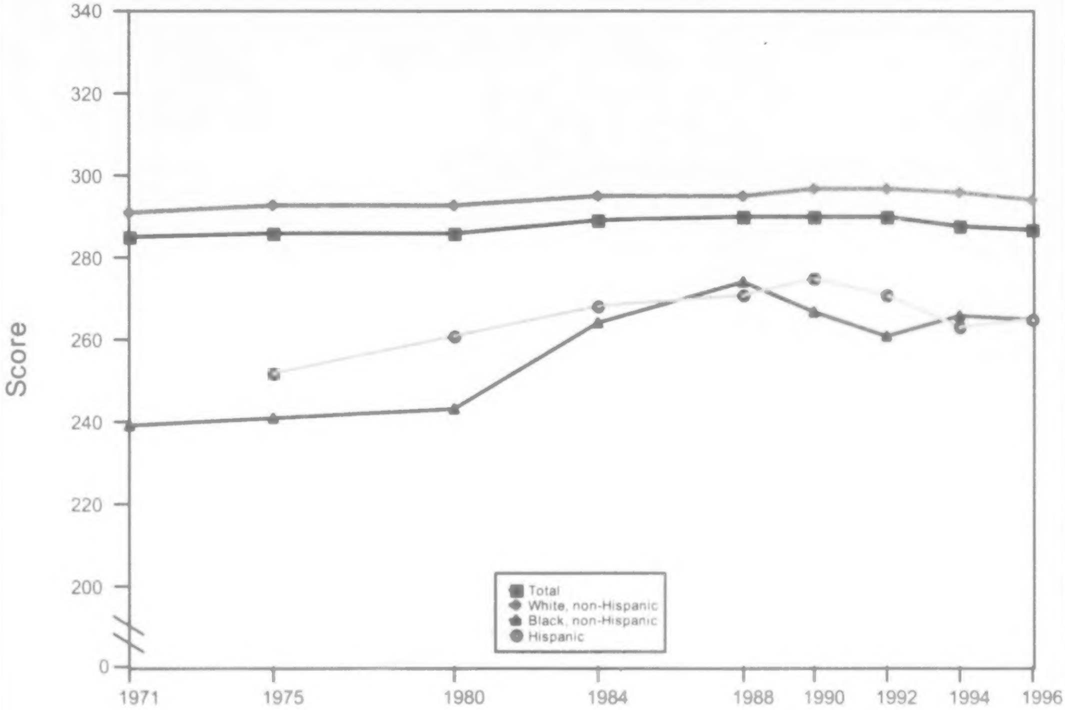
Level 300: Understands complicated information

Level 350: Learns from specialized reading materials

Source: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics, Table C.18.

Figure EA 2.1

Average reading proficiency for children age 17 in the United States, by race and Hispanic origin:ᵃ selected years, 1971-1996



ᵃPersons of Hispanic origin may be of any race.

Note: The reading proficiency scale ranges from 0 to 500.

Level 150: Simple, discrete reading tasks

Level 200: Partial skills and understanding

Level 250: Interrelates ideas and makes generalizations

Level 300: Understands complicated information

Level 350: Learns from specialized reading materials

Source: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress*. NCES 97-985. Washington, D.C.: National Center for Education Statistics, Table C.18.

EA 2.2

MATHEMATICS PROFICIENCY FOR CHILDREN AGES 9, 13, AND 17

One of the National Education Goals for the year 2000, adopted by Congress, is to improve the relative standing of students in the United States in mathematics achievement.[27] In a 1995 comparison of 8th-graders in the United States with their peers in 40 other countries, the Third International Math and Science Study showed that students in the United States had significantly lower overall mathematics proficiency scores than students in 20 countries, had similar scores to students in 13 countries, and had higher scores than students in 7 countries.[28]

In order to monitor progress in the mathematics achievement of students in the United States, the National Assessment of Educational Progress (NAEP) has conducted national assessments of the mathematics performance of 9-, 13-, and 17-year-olds. There are five levels of mathematics proficiency reported by NAEP, ranging from Level 150 (understanding simple arithmetic facts) to Level 350 (multi-step problem solving and algebra).[29] The following tables report the average mathematics proficiency scores of students in the three age groups between 1973 and 1996.

Trends in Mathematics Proficiency Scores. Among 9-year-olds, average mathematics proficiency scores remained the same between 1973 and 1982 and then increased substantially to 231 in 1994; scores remained stable from 1994 to 1996 (see Table EA 2.2.A). Among 13-year-olds, mathematics proficiency scores increased between 1978 (264) and 1994 (274); again, scores remained stable from 1994 to 1996 (see Table EA 2.2.B). Among 17-year-olds, average proficiency scores declined between 1973 and 1982, after which they increased and stabilized at a level slightly higher than that obtained in 1973 (see Table EA 2.2.C).

Differences by Gender. In 1996, mathematics proficiency scores were higher for males than for females across all age groups; however, differences are small and in many years were virtually nonexistent for 9- and 13-year-olds. Proficiency scores in 1996 were higher for males by an average of 4 points for 9-year-olds and 13-year-olds and 5 points for 17-year-olds.

Differences by Race and Hispanic Origin.[30] There are consistently large differences in mathematics proficiency by race and Hispanic origin. For example, among 17-year-olds in 1996, blacks and Hispanics had lower proficiency scores (286 and 292, respectively) than whites (313) (see Table EA 2.2.C); however, black and Hispanic 17-year-olds had substantial gains in achievement between 1973 and 1996 (see Figure EA 2.2).

Differences by Parents' Education Level.[31] There are large variations in average mathematics proficiency levels by level of parental education for 13- and 17-year-olds (see Tables EA 2.2.B and EA 2.2.C).[32] For example, in 1996, 13-year-olds whose better-educated parent did not have a high school education had the lowest average proficiency scores (254), while those whose parent(s) had graduated from college had the highest scores (283) (see Table EA 2.2.B).

Differences by Type of School. Average mathematics proficiency scores among students in public schools have been consistently lower than average scores among students in nonpublic schools. This is true for every age group and every year reported (see Tables EA 2.2.A, EA 2.2.B, and EA 2.2.C).

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[27] National Education Goals Panel. 1997. *The National Education Goals Report: Building a Nation of Learners, 1997* (Goal 5, p. xvi). Washington, D.C.: U.S. Government Printing Office.

[28] U.S. Department of Education, National Center for Education Statistics. 1997. *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context*. No. 97-198. Washington, D.C.: U.S. Government Printing Office.

[29] NAEP has regularly been conducting assessments of students in public and private schools in the United States in order to monitor trends in academic achievement in core curriculum areas since the 1970s. NAEP uses proficiency scales that range from 0 to 500. To give meaning to the results, students' performance is characterized at five levels along the proficiency scales (150, 200, 250, 300, 350).

[30] Estimates for whites and blacks exclude Hispanics of those races.

[31] Parents' education level refers to the highest level of education completed by either parent.

[32] Parents' education level is not reported at age 9 because approximately one-third of these students did not know their parent's education level.

Table EA 2.2.A

Average mathematics proficiency for children age 9 in the United States, by gender, race and Hispanic origin,[a] and type of school: selected years, 1973-1996

	1973	1978	1982	1986	1990	1992	1994	1996
Total	219	219	219	222	230	230	231	231
Gender								
Male	218	217	217	222	229	231	232	233
Female	220	220	221	222	230	228	230	229
Race and Hispanic origin[a]								
White, non-Hispanic	225	224	224	227	235	235	237	237
Black, non-Hispanic	190	192	195	202	208	208	212	212
Hispanic	202	203	204	205	214	212	210	215
Type of school								
Public	—	217	217	220	229	228	229	230
Nonpublic	—	231	232	230	238	242	245	239

— = not available

[a] Persons of Hispanic origin may be of any race.

Note: The mathematics proficiency scale ranges from 0 to 500:

Level 150: Simple arithmetic facts

Level 200: Beginning skills and understanding

Level 250: Numerical operations and beginning problem solving

Level 300: Moderately complex procedures and reasoning

Level 350: Multi-step problem solving and algebra

Sources: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics; data for 1973 appear in *NAEP 1992 Trends in Academic Progress.* Report No. 23-TR01. Washington, D.C.: National Center for Education Statistics, Table B.16.

Table EA 2.2.B

Average mathematics proficiency for children age 13 in the United States, by gender, race and Hispanic origin,[a] parents' education level[b] and type of school: selected years, 1973-1996

	1973	1978	1982	1986	1990	1992	1994	1996
Total	266	264	269	269	270	273	274	274
Gender								
Male	265	264	269	270	271	274	276	276
Female	267	265	268	268	270	272	273	272
Race and Hispanic origin[a]								
White, non-Hispanic	274	272	274	274	276	279	281	281
Black, non Hispanic	228	230	240	249	249	250	252	252
Hispanic	239	238	252	254	255	259	256	256
Parents' education level[b]								
Less than high school	—	245	251	252	253	256	255	254
Graduated high school	—	263	263	263	263	263	266	267
Some education after high school	—	273	275	274	277	278	277	278
Graduated college	—	284	282	280	280	283	285	283
Type of school								
Public	—	263	267	269	269	272	273	273
Nonpublic	—	279	281	276	280	283	285	286

— = not available

[a] Persons of Hispanic origin may be of any race.

[b] Parents' education level refers to the highest level of education completed by either parent.

Note: The mathematics proficiency scale ranges from 0 to 500:

Level 150: Simple arithmetic facts

Level 200: Beginning skills and understanding

Level 250: Numerical operations and beginning problem solving

Level 300: Moderately complex procedures and reasoning

Level 350: Multi-step problem solving and algebra

Sources: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics; data for 1973 appear in *NAEP 1992 Trends in Academic Progress.* Report No. 23-TR01. Washington, D.C.: National Center for Education Statistics, Table B.17.

Table EA 2.2.C

Average mathematics proficiency for children age 17 in the United States, by gender, race and Hispanic origin,[a] parents' education level,[b] and type of school: selected years, 1973-1996

	1973	1978	1982	1986	1990	1992	1994	1996
Total	304	300	299	302	305	307	306	307
Gender								
Male	309	304	302	305	306	309	309	310
Female	301	297	296	299	303	305	304	305
Race and Hispanic origin[a]								
White, non-Hispanic	310	306	304	308	310	312	312	313
Black, non Hispanic	270	268	272	279	289	286	286	286
Hispanic	277	276	277	283	284	292	291	292
Parents' education level[b]								
Less than high school	—	280	279	279	285	286	284	281
Graduated high school	—	294	293	293	294	298	295	297
Some education after high school	—	305	304	305	308	308	305	307
Graduated college	—	317	312	314	316	316	318	317
Type of school								
Public	—	300	297	301	304	305	304	306
Nonpublic	—	314	311	320	318	320	319	316

— = not available

[a] Persons of Hispanic origin may be of any race.

[b] Parents' education level refers to the highest level of education completed by either parent.

Note: The mathematics proficiency scale ranges from 0 to 500:

Level 150: Simple arithmetic facts

Level 200: Beginning skills and understanding

Level 250: Numerical operations and beginning problem solving

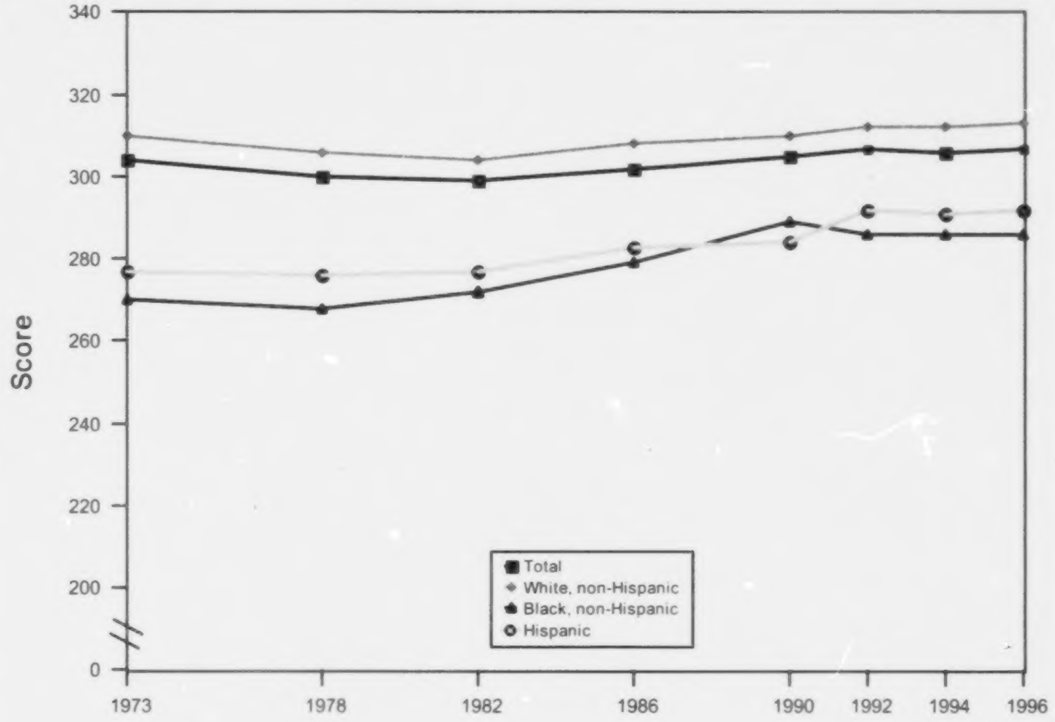
Level 300: Moderately complex procedures and reasoning

Level 350: Multi-step problem solving and algebra

Sources: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics; data for 1973 appear in *NAEP 1992 Trends in Academic Progress.* Report No. 23-TR01. Washington, D.C.: National Center for Education Statistics, Table B.18.

Figure EA 2.2

Average mathematics proficiency for children age 17 in the United States, by race and Hispanic origin:[a] selected years, 1973-1996



[a]Persons of Hispanic origin may be of any race.

Note: The mathematics proficiency scale ranges from 0 to 500.

Level 150: Simple arithmetic facts

Level 200: Beginning skills and understanding

Level 250: Numerical operations and beginning problem solving

Level 300: Moderately complex procedures and reasoning

Level 350: Multi-step problem solving and algebra

Sources: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics; data for 1973 appear in *NAEP 1992 Trends in Academic Progress.* Report No. 23-TR01. Washington, D.C.: National Center for Education Statistics, Table B.18.

EA 2.3

SCIENCE PROFICIENCY FOR CHILDREN AGES 9, 13, AND 17

One of the National Education Goals for the year 2000, adopted by Congress, is to improve the relative standing of students in the United States in science achievement.[33] In a 1995 comparison of 8th-graders in the United States with 8th-graders in 40 other countries, the Third International Math and Science Study showed that students in the United States had significantly lower overall science proficiency scores than students in 9 countries, had similar scores to students in 16 countries, and had higher scores than students in 15 countries.[34]

In order to present time trends in science proficiency levels, the National Assessment of Educational Progress (NAEP) reports five different proficiency levels, ranging from Level 150 (knows everyday science facts) to Level 350 (integrates specialized scientific information).[35] The following tables report the average science proficiency scores of students in the three age groups between 1977 and 1996.

Trends in Science Proficiency Scores. Average science proficiency scores have increased among all age groups since 1977. Among 9-year-olds, average science proficiency scores increased between 1977 (220) and 1994 (231) and remained stable through 1996 (230) (see Table EA 2.3.A). Similarly, among 13-year-olds, average scores increased between 1977 (247) and 1994 (257) and remained constant through 1996 (256) (see Table EA 2.3.B). Among 17-year-olds, average science proficiency scores declined between 1977 (290) and 1982 (283), after which they increased to 296 in 1996 (see Table EA 2.3.C). Thus, gains in science proficiency levels among 17-year-olds from 1977 to 1996 were not as great as gains for the other two age groups.

Differences by Gender. Average science proficiency scores have been consistently higher for males than females over time and for all age groups, though differences are smaller among 9-year-olds. Among 13-year-olds in 1996, boys scored on average 9 points higher than girls; among 17-year-olds, the average difference was 8 points; and among 9-year-olds, males scored on average 4 points higher than females.

Differences by Race and Hispanic Origin.[36] There are large differences in science proficiency scores by race and Hispanic origin among all age groups. For example, among 17-year-olds in 1996, whites had higher average science proficiency scores (307) than blacks (260) or Hispanics (269) (see Table EA 2.3.C); however, black 17-year-olds had especially high gains in achievement since 1977 (see Figure EA 2.3). Black 9-year-olds and 13-year-olds also showed high gains in science achievement over time.

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[33] National Education Goals Panel. 1997. *The National Education Goals Report: Building a Nation of Learners, 1997* (Goal 5, p. xvi). Washington, D.C.: U.S. Government Printing Office.

[34] U.S. Department of Education, National Center for Education Statistics. 1997. *Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context.* No. 97-198. Washington, D.C.: U.S. Government Printing Office.

[35] NAEP has regularly been conducting assessments of students in public and private schools in the United States in order to monitor trends in academic achievement in core curriculum areas since the 1970s. NAEP uses proficiency scales that range from 0 to 500. To give meaning to the results, students' performance is characterized at five levels along the proficiency scales (150, 200, 250, 300, 350).

[36] Estimates for whites and blacks exclude Hispanics of those races.

Differences by Parents' Education Level.[37] Average science proficiency levels vary dramatically by level of parents' education.[38] For example, among 13-year-olds and 17-year-olds in 1996, the lowest average science proficiency scores were among teens whose better-educated parent did not have a high school education, while the highest scores were among teens who had a parent who had graduated from college. In 1996, the average science proficiency score among 13-year-old children of parents with a college education (266) was similar to the average score among 17-year-old children of parents without a high school diploma (261) (see Tables EA 2.3.B and EA 2.3.C).

Differences by Type of School. Average science proficiency scores have been consistently higher among students attending nonpublic schools than among students attending public schools. This is true for every age group and every year reported (see Tables EA 2.3.A, EA 2.3.B, and EA 2.3.C).

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[37] Parents' education level refers to the highest level of education completed by either parent.

[38] Parents' education is not reported at age 9 because approximately one-third of these students did not know their parents' education level.

Table EA 2.3.A

Average science proficiency for children age 9 in the United States, by gender, race and Hispanic origin,[a] and type of school: selected years, 1977-1996

	1977	1982	1986	1990	1992	1994	1996
Total	220	221	224	229	231	231	230
Gender							
Male	222	221	227	230	235	232	232
Female	218	221	221	227	227	230	228
Race and Hispanic origin[a]							
White, non-Hispanic	230	229	232	238	239	240	239
Black, non-Hispanic	175	187	196	196	200	201	202
Hispanic	192	189	199	206	205	201	207
Type of school							
Public	218	220	223	228	229	230	229
Nonpublic	235	232	233	237	240	242	238

[a] Persons of Hispanic origin may be of any race.

Note: The science proficiency scale ranges from 0 to 500:

Level 150: Knows everyday science facts

Level 200: Understands simple scientific principles

Level 250: Applies general scientific information

Level 300: Analyzes scientific procedures and data

Level 350: Integrates specialized scientific information

Source: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics, Table A.16.

Table EA 2.3.B

Average science proficiency for children age 13 in the United States, by gender, race and Hispanic origin,[a] parents' education level,[b] and type of school: selected years, 1977-1996

	1977	1982	1986	1990	1992	1994	1996
Total	247	250	251	255	258	257	256
Gender							
Male	251	256	256	259	260	259	261
Female	244	245	247	252	256	254	252
Race and Hispanic origin[a]							
White, non-Hispanic	256	257	259	264	267	267	266
Black, non Hispanic	208	217	222	226	224	224	226
Hispanic	213	226	226	232	238	232	232
Parents' education level[b]							
Less than high school	224	225	229	233	234	234	232
Graduated high school	245	243	245	247	246	247	248
Some education after high school	260	259	258	263	266	260	260
Graduated college	266	264	264	268	269	269	266
Type of school							
Public	245	249	251	254	257	255	255
Nonpublic	268	264	263	269	265	268	268

[a] Persons of Hispanic origin may be of any race.

[b] Parents' education level refers to the highest level of education completed by either parent.

Note: The science proficiency scale ranges from 0 to 500:

Level 150: Knows everyday science facts

Level 200: Understands simple scientific principles

Level 250: Applies general scientific information

Level 300: Analyzes scientific procedures and data

Level 350: Integrates specialized scientific information

Source: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics, Table A.17.

Table EA 2.3.C

Average science proficiency for children age 17 in the United States, by gender, race and Hispanic origin[a], parents' education level[b], and type of school: selected years, 1977-1996

	1977	1982	1986	1990	1992	1994	1996
Total	290	283	289	290	294	294	296
Gender							
Male	297	292	295	296	299	300	300
Female	282	275	282	285	289	289	292
Race and Hispanic origin[a]							
White, non-Hispanic	298	293	298	301	304	306	307
Black, non Hispanic	240	235	253	253	256	257	260
Hispanic	262	249	259	262	270	261	269
Parents' education level[b]							
Less than high school	265	259	258	261	262	256	261
Graduated high school	284	275	277	276	280	279	282
Some education after high school	296	290	295	297	296	295	297
Graduated college	309	300	304	306	308	311	308
Type of school							
Public	288	282	287	289	292	292	295
Nonpublic	308	292	321	308	312	310	303

[a] Persons of Hispanic origin may be of any race.

[b] Parents' education level refers to the highest level of education completed by either parent.

Note: The science proficiency scale ranges from 0 to 500:

Level 150: Knows everyday science facts

Level 200: Understands simple scientific principles

Level 250: Applies general scientific information

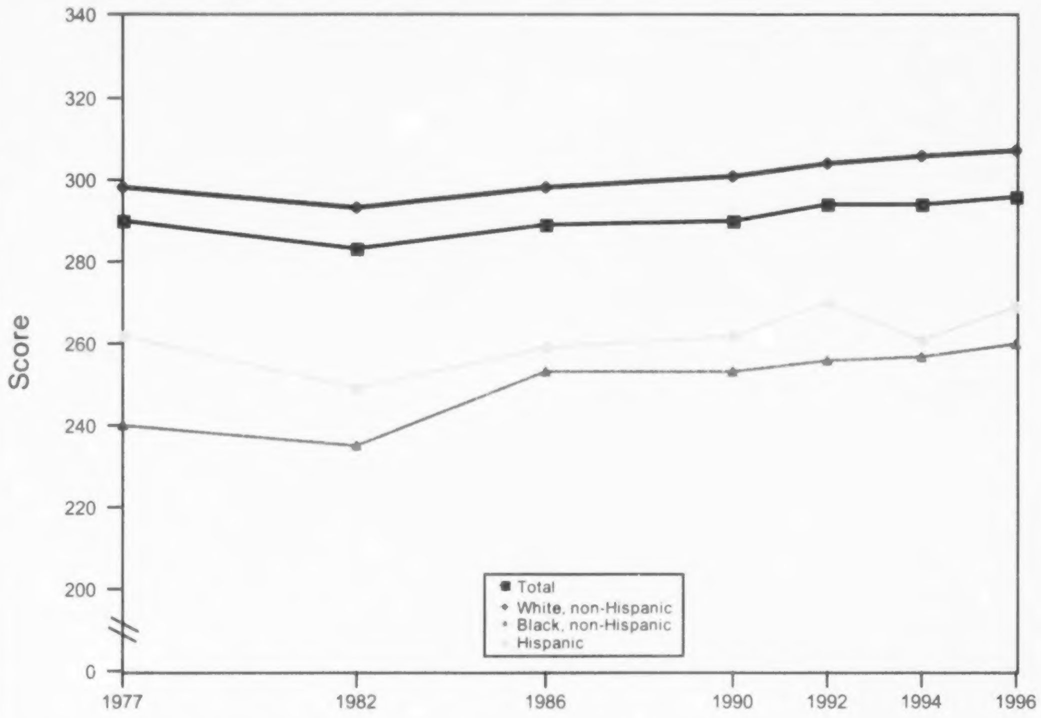
Level 300: Analyzes scientific procedures and data

Level 350: Integrates specialized scientific information

Source: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress.* NCES 97-985. Washington, D.C.: National Center for Education Statistics, Table A.18.

Figure EA 2.3

Average science proficiency for children age 17 in the United States, by race and Hispanic origin:[a] selected years, 1977-1996



[a]Persons of Hispanic origin may be of any race.

Note: The science proficiency scale ranges from 0 to 500.

Level 150: Knows everyday science facts

Level 200: Understands simple scientific principles

Level 250: Applies general scientific information

Level 300: Analyzes scientific procedures and data

Level 350: Integrates specialized scientific information

Source: Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress*. NCES 97-985. Washington, D.C.: National Center for Education Statistics, Table A.18.

EA 2.4

ARTS PROFICIENCY FOR CHILDREN IN GRADE 8

Artistic expression is one of the key vehicles for individual creativity and for the reflection and transmission of cultural messages. An understanding and appreciation of the arts therefore helps to nurture human creativity and fosters the celebration of a diverse cultural heritage. Recent research suggests that arts education can improve student performance in other intellectual and academic areas, including math and science.[39] College Board data show that children who have participated in sequential arts programs outperform their peers who have not had arts training on both the verbal and math components of the SAT.[40]

The National Assessment of Educational Progress (NAEP) completed assessments of 8th-graders' music, visual arts, and theatre skills in 1997.[41] For the music and visual arts assessments, data were collected on students' ability to respond to, analyze, or evaluate musical pieces or works of art.[42] Average scores were coded on a scale of 0 to 300. Because ability scores had different ranges across music and the visual arts, comparisons should not be made between student results across disciplines. In other words, a score of 100 in the visual arts is not necessarily "better" than a score of 90 in music.

Differences by Gender. Girls outperformed boys in responding to and analyzing musical pieces (see Figure EA 2.4.A). For example, 8th-grade girls had an average music score of 160, whereas boys had an average score of 140. For evaluating visual artwork, girls' scores were 8 points higher than boys' scores (154 versus 146).

Differences by Race and Hispanic Origin.[43] There are significant differences in students' artistic evaluation skills by racial/ethnic group (see Table EA 2.4). White and Asian students had higher average music scores (158 and 152, respectively) than did black (130) and Hispanic students (127).

A similar pattern is seen for the visual arts (see Table EA 2.4). White and Asian students had higher average scores (159 and 153, respectively) than did black or Hispanic students (124 and 128, respectively).

Differences by Parents' Education Level.[44] Consistent with other NAEP assessments, higher levels of parental education were associated with higher levels of student performance in both music and the visual arts. For example, 8th-graders whose better-educated parent had graduated from college had higher music scores (159) than students whose parent(s) had some education past high school (150) or whose parent(s) was/were high school graduate(s) (139). Students whose better-educated parent did not finish high school had the lowest scores (129) (see Figure EA 2.4.B). The same pattern is evident for the visual arts scores.

Differences by Type of School. Students from nonpublic schools had higher scores for the visual arts (167) than did students from public schools (148).

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[39] Kane, E., and Frankonis, E. May, 1998. "Arts education in the New Millennium." *Education New York 2*(5): 3.

[40] Childress, J. May, 1998. "Art Education Pays Off." *Education New York, 2*(5): 5.

[41] Unlike other NAEP assessments that are typically conducted on nationally representative samples of students in grades 4, 8, and 12, the 1997 arts assessments were conducted on grade 8 students only. This was due to budgetary constraints. Because the theatre assessment was conducted on a "targeted" sample rather than a nationally representative sample, results are not presented here. Finally, although NAEP conducted an arts assessment in music and visual arts in 1974 and 1978, considerable changes were made to the 1997 assessment such that comparable data for trends analyses are not possible. Therefore, only results from the 1997 NAEP music and visual arts assessments are presented here.

[42] Students were also scored on their ability to *create* and *perform* works of art; however, only students' ability to *respond* to art will be discussed here.

[43] Estimates for whites and blacks exclude Hispanics of those races.

[44] Parents' education level refers to the highest level of education completed by either parent.

Table EA 2.4

Average music and visual arts proficiency for children in grade 8 in the United States, by gender, race and Hispanic origin,[a] parents' education level,[b] and type of school: 1997

	Music	Visual Arts
Total	150	150
Gender		
Male	140	146
Female	160	154
Race and Hispanic origin[a]		
White, non-Hispanic	158	159
Black, non Hispanic	130	124
Hispanic	127	128
Asian	152	153
Parents' education level[b]		
Less than high school	129	125
Graduated high school	139	138
Some education after high school	150	153
Graduated college	159	158
Type of school		
Public	149	148
Nonpublic	158	167

[a] Persons of Hispanic origin may be of any race.

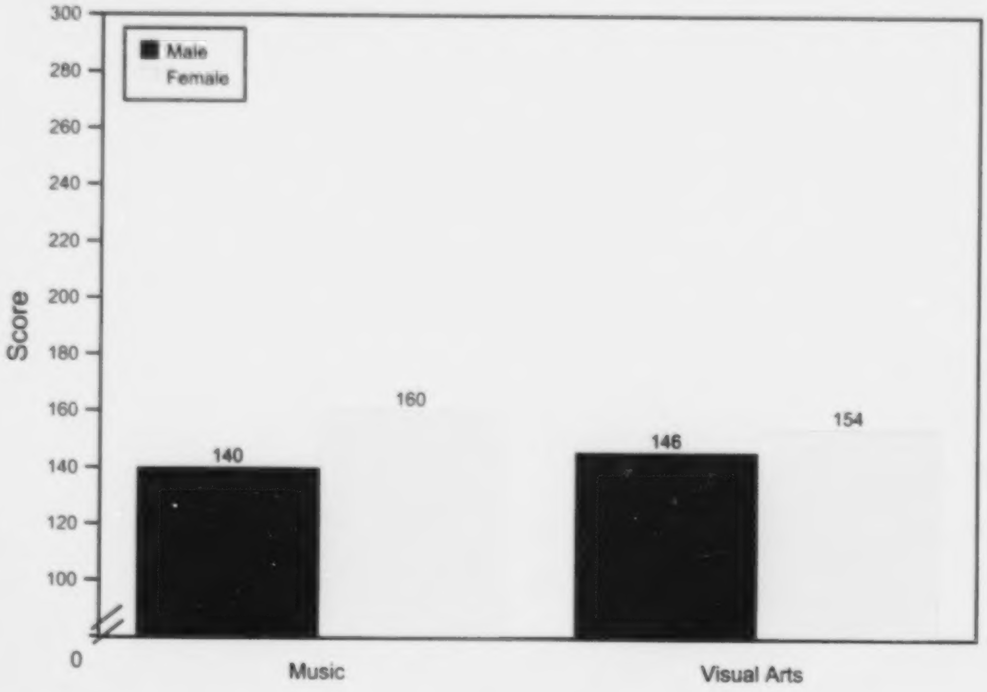
[b] Parents' education level refers to the highest level of education completed by either parent.

Note: The music and visual arts scale scores range from 0 to 300.

Source: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1997 Arts Assessment. As published in Persky, H.R., Sandene, B.A. and Askew, J.M. 1999. *The NAEP 1997 Arts Report Card: Eighth-Grade Findings from the National Assessment of Educational Progress.* NCES 1999-486. Washington, D.C.: National Center for Education Statistics, Tables 6.4, 6.5, 6.7, 6.8, 6.10, 6.11, 6.13, and 6.14.

Figure EA 2.4.A

Average music and visual arts proficiency scores for children in grade 8 in the United States, by gender: 1997

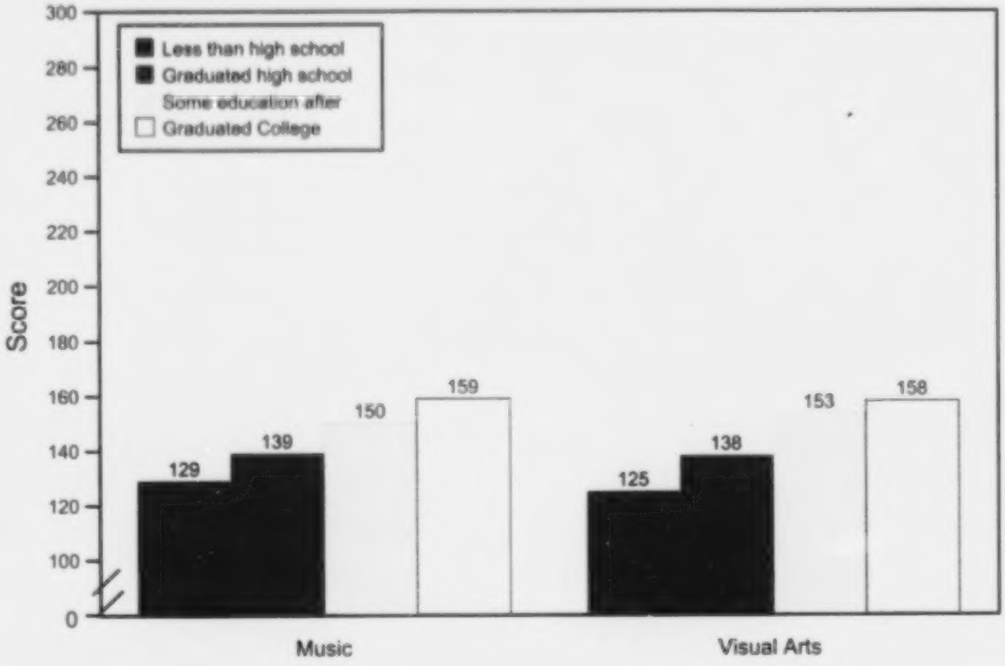


Note: The music and visual arts scale scores range from 0 to 300.

Source: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1997 Arts Assessment. As published in Persky, H.R., Sandene, B.A. and Askew, J.M. 1999. *The NAEP 1997 Arts Report Card: Eighth-Grade Findings from the National Assessment of Educational Progress.* NCES 1999-486. Washington, D.C.: National Center for Education Statistics, Tables 6.4 and 6.5.

Figure EA 2.4.B

Average music and visual arts proficiency scores for children in grade 8 in the United States, by parents' education level:ᵃ 1997



ᵃParents' education level refers to the highest level of education completed by either parent.

Note: The music and visual arts scale scores range from 0 to 300.

Source: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1997 Arts Assessment. As published in Persky, H.R., Sandene, B.A. and Askew, J.M. 1999. *The NAEP 1997 Arts Report Card: Eighth-Grade Findings from the National Assessment of Educational Progress.* NCES 1999-486. Washington, D.C.: National Center for Education Statistics, Tables 6.13 and 6.14.

EA 3.1

FAMILY-CHILD ENGAGEMENT IN LITERACY ACTIVITIES

Numerous studies have documented the importance of parental involvement in literacy activities with their children. One of the National Education Goals stresses the importance of family/child engagement in literacy activities, especially among children who are "at risk" of school failure, in order for all children in the United States to be able to start school ready to learn.[45]

Table EA 3.1 presents three types of literacy activities that parents may engage in with their children. In 1996, a majority of 3- to 5-year-old children (57 percent) were read to by a parent or other family member every day, showing a slight increase from 1993 (53 percent). More than one-third of children (37 percent) visited a library at least once in the past month. About 55 percent of children were regularly told stories in 1996 (three or more times a week), a substantial increase from 1991 levels (39 percent).

Differences by Race and Hispanic Origin.[46] There are substantial differences in all literacy activities by race and Hispanic origin; for example, in 1996, white children were more likely to be read to every day (64 percent) than black children (44 percent) or Hispanic children (39 percent). Similarly, white children (59 percent) were more likely to be told a story frequently than either black or Hispanic children (47 percent) (see Table EA 3.1). Also, more white children visited a library at least once in the past month in 1996 (41 percent) than either black children (31 percent) or Hispanic children (27 percent). These differences have been fairly stable over time.

Differences by Socioeconomic Status. Children in families living at or above the poverty threshold are much more likely to be engaged in literacy activities on a regular basis than are children who live in poverty; for example, in 1996, 61 percent of children in non-poor families were read to every day by a parent or other family member, compared with 46 percent of children in poor families (see Figure EA 3.1). There are also substantial differences in literacy activities by mother's education level. For example, about one-fifth (19 percent) of children whose mothers did not have a high school diploma visited a library once or more in the past month, compared with more than half (56 percent) of children whose mothers were college graduates (see Table EA 3.1).

Differences by Family Structure. Children in two-parent families were more likely to participate in all three types of literacy activities than children who lived with one or no parent.

Differences by Mother's Employment Status. Children whose mothers were employed 35 hours or more per week were slightly less likely to engage in any of the three literacy activities than children whose mothers were either working part-time or not working.

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[45] National Education Goals Panel. 1997. *The National Education Goals Report: Building a Nation of Learners, 1997* (Goal 1, p. xiv). Washington, D.C.: U.S. Government Printing Office.

[46] Estimates of whites and blacks exclude Hispanics of those races.

Table EA 3.1

Percentage of 3- through 5-year-olds[a] in the United States who have participated in literacy activities with a family member, by child and family characteristics: 1991, 1993, 1995, and 1996

	Read to every day				Told a story at least three times a week				Visited a library at least once in the past month			
	1991	1993	1995	1996	1991	1993	1995	1996	1991	1993	1995	1996
Total —	53	58	57	39	43	50	55	35	38	39	37	
Gender												
Male	—	51	57	56	37	43	49	55	34	38	37	37
Female	—	54	59	57	41	43	51	56	36	38	41	36
Race and Hispanic origin[b]												
White, non-Hispanic	—	59	65	64	40	44	53	59	39	42	43	41
Black, non-Hispanic	—	39	43	44	34	39	42	47	25	29	32	31
Hispanic	—	37	38	39	38	38	42	47	23	26	27	27
Poverty status												
At or above poverty	—	56	62	61	39	44	53	58	38	42	43	41
Below poverty	—	44	48	46	38	40	44	49	26	29	30	28
Family structure[c]												
Two parents	—	55	61	61	39	44	52	59	38	41	43	40
One or no parent	—	46	49	46	37	41	46	47	23	30	30	29
Mother's education level[d]												
Less than high school	—	37	40	37	34	37	39	47	16	22	20	19
High school/GED	—	48	48	49	38	41	48	54	29	31	33	31
Vocational/technical or some college	—	57	64	62	41	45	53	55	40	44	42	41
College graduate	—	71	76	77	42	49	55	64	55	56	57	56
Mother's employment status[d]												
35 hours or more per week	—	52	55	54	37	43	49	53	30	34	35	32
Less than 35 hours per week	—	56	63	59	40	45	53	56	41	47	46	39
Not in labor force	—	55	60	59	42	43	50	56	38	37	42	40

— = not available

[a] Estimates are based on children who have yet to enter kindergarten.

[b] Persons of Hispanic origin may be of any race.

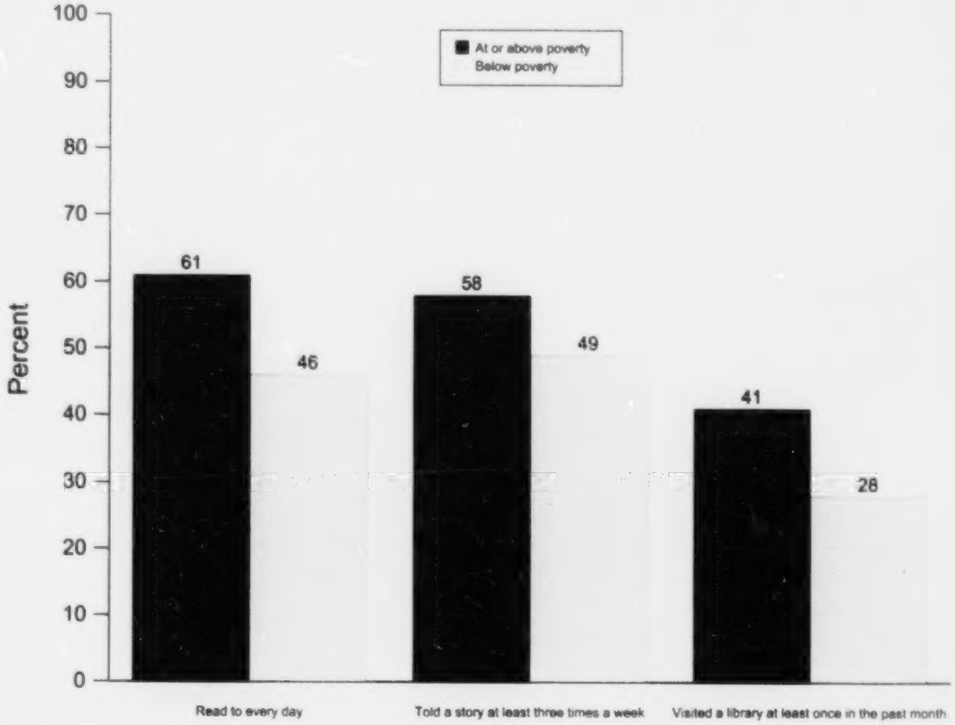
[c] Parents include any combination of a biological, adoptive, step-, and foster mother and/or father. No parents in the household indicates that the child is living with nonparent guardians (e.g., grandparents).

[d] Children without mothers in the home are not included in estimates dealing with mother's education or mother's employment status. A mother is defined as a biological mother, adoptive mother, stepmother, foster mother, or female guardian (e.g., grandmother) who resides in the home with the child.

Sources: U.S. Department of Education, National Center for Education Statistics, 1991, 1993, 1995, and 1996 National Household Education Survey (unpublished data). Tabulated by U.S. Department of Education, National Center for Education Statistics. Estimates of "read to every day" as published in *America's Children: Key National Indicators of Well-Being, 1998.* Federal Interagency Forum on Child and Family Statistics, Washington, D.C.: U.S. Government Printing Office. Table ED1.

Figure EA 3.1

Percentage of 3- through 5-year-olds in the United States who have participated in literacy activities with a family member, by poverty status: 1996



Sources: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey (unpublished data). Tabulated by U.S. Department of Education, National Center for Education Statistics. Estimates of "read to every day" as published in Federal Interagency Forum on Child and Family Statistics. 1998. *America's Children: Key National Indicators of Well-Being, 1998.* Washington, D.C.: U.S. Government Printing Office, Table ED1.

EA 3.2

READING HABITS OF CHILDREN AND YOUTH

Independent reading is one necessary aspect of literacy development. The National Assessment of Educational Progress (NAEP) has documented the association between students who read for fun in their free time and reading achievement. Students ages 9, 13, and 17 who read more frequently for fun had consistently higher average reading proficiency scores than those students who read less often.[47]

Table EA 3.2 presents the percentage of students who read for fun on a daily basis for three age groups (9-, 13-, and 17-year-olds).

Differences by Age. In 1996, over half of 9-year-olds (54 percent) reported reading for fun on a daily basis, compared with about one-third of 13-year-olds (32 percent) and about one-quarter of 17-year-olds (23 percent) (see Table EA 3.2).

Differences by Gender. Among children ages 9 and 13, larger proportions of girls than boys reported frequent reading in their spare time. For example, more than half (57 percent) of 9-year-old girls read for fun on a daily basis, compared with 51 percent of 9-year-old boys, in 1996. Among 17-year-olds, however, similar proportions of boys (22 percent) and girls (24 percent) reported reading on a daily basis in 1996 (see Figure EA 3.2).

Differences by Race and Hispanic Origin.[48] In 1996, the percentage of 9-, 13-, and 17-year-olds who reported reading for fun on a daily basis was similar for all racial/ethnic groups (see Table EA 3.2).

Differences by Parents' Education Level.[49] In 1996, 13-year-olds whose better-educated parent had some education after high school were more likely to read for fun than students whose parent(s) had no education beyond high school (see Table EA 3.2). A similar pattern is found among 17-year-olds; for example, in 1996, 28 percent of 17-year-olds whose better-educated parent had graduated from college read for fun on a daily basis. In contrast, 18 percent of 17-year-olds whose parent(s) had graduated from high school (but had no education beyond that) and 14 percent whose parent(s) had not finished high school reported reading for fun on a daily basis (see Table EA 3.2).

Differences by Type of School. Larger percentages of 13- and 17-year-olds who attended nonpublic schools read for fun on a daily basis than did their counterparts in public schools (see Table EA 3.2). Among 9-year-olds, a larger percentage of public school students reported reading for fun in 1992 and 1994, but this pattern reversed in 1996 (see Table EA 3.2).

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[47] Campbell, J.R., Voelkl, K.E., and Donahue, P.L. 1997. *NAEP 1996 Trends in Academic Progress* (p. 141). NCES 97-985. Washington, D.C.: National Center for Education Statistics.

[48] Estimates for whites and blacks exclude Hispanics of those races.

[49] Parents' education level refers to the highest level of education completed by either parent.

Table EA 3.2

Percentage of students ages 9, 13, and 17 in the United States who read for fun on a daily basis, by gender, race and Hispanic origin,[a] parents' education level,[b] and type of school: 1992, 1994, and 1996

	Age 9			Age 13			Age 17		
	1992	1994	1996	1992	1994	1996	1992	1994	1996
Total	56	58	54	37	32	32	27	30	23
Gender									
Male	48	49	51	30	25	27	23	29	22
Female	64	66	57	44	39	38	30	30	24
Race and Hispanic origin[a]									
White, non-Hispanic	57	58	54	37	38	33	29	34	24
Black, non-Hispanic	54	58	51	35	18	29	14	16	21
Hispanic	54	58	56	44	15	28	25	17	21
Parents' education level[b]									
Less than high school	—	—	—	16	24	29	23	15	14
Graduated high school	—	—	—	33	28	28	16	25	18
Some education after high school	—	—	—	37	40	41	28	30	22
Graduated college	—	—	—	44	37	34	35	36	28
Type of school									
Public	57	57	54	36	31	33	26	29	21
Nonpublic	52	54	61	49	40	36	44	46	28

— = not available

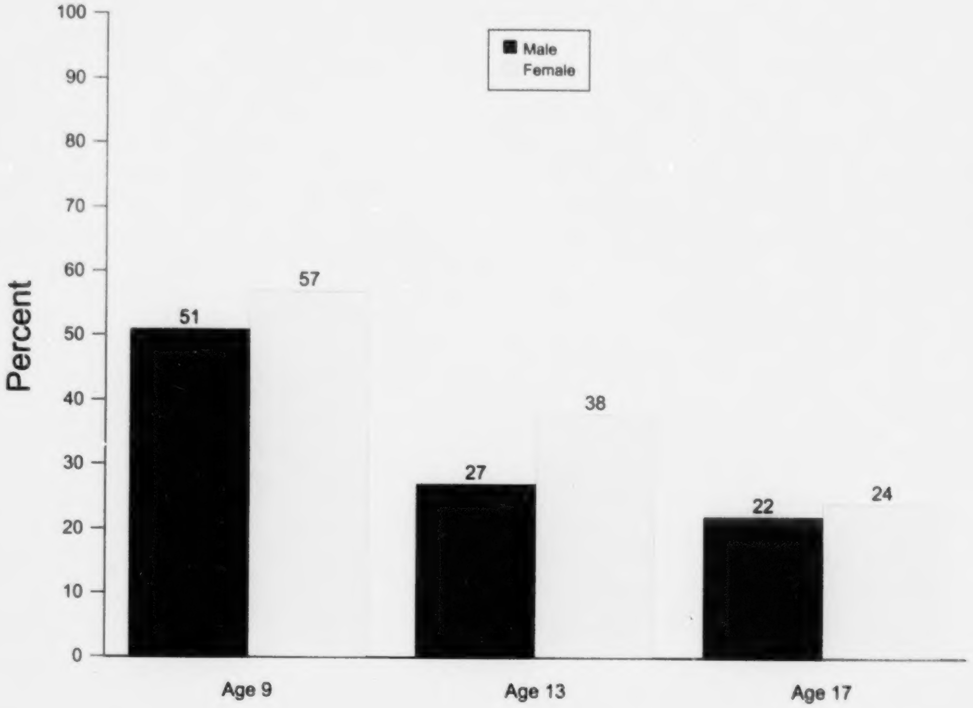
[a] Persons of Hispanic origin may be of any race.

[b] Parents' education level refers to the highest level of education completed by either parent.

Sources: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1996 Long-Term Trends, Reading Assessment, unpublished data. Tabulated by U.S. Department of Education, National Center for Education Statistics.

Figure EA 3.2

Percentage of students ages 9, 13, and 17 in the United States who read for fun on a daily basis, by gender: 1996



Sources: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, and 1996 Long-Term Trends, Reading Assessment, unpublished data. Tabulated by U.S. Department of Education, National Center for Education Statistics.

EA 3.3

PARENTAL INVOLVEMENT IN CHILD'S SCHOOL

Many educators consider parental involvement in school activities to have a beneficial effect on children's school performance. They associate higher levels of parental involvement with greater monitoring of school and classroom activities, a closer coordination of teacher and parent efforts, greater teacher attention to the child, and earlier identification of problems that might inhibit learning.[50] Indeed, in two-parent families, parental involvement of both mothers and fathers in their child's school is significantly associated with an increased likelihood of 1st- through 12th-grade children earning mostly A's and with a reduced likelihood that these children will ever repeat a grade.[51]

Differences by Children's Grade Level. Figure EA 3.3 presents national estimates for 1996 on the degree of parental school participation among parents of children in grades 3 through 5, 6 through 8, and 9 through 12. Possible activities include (1) attending general school meetings (e.g., a PTA meeting or back-to-school night), (2) going to a regularly scheduled parent/teacher conference, (3) attending a school or class event such as a play or sports event, and (4) volunteering at the school or serving on a school committee.[52] As the figure indicates, the level of parental involvement in school activities decreases substantially as children get older.

- Sixty-nine percent of children in grades 3 through 5 had parents who were classified as highly involved in their children's schools, meaning that they had been involved in three or more types of activities described above during the school year.
- Children in grades 6 through 8 and 9 through 12 had parents with substantially lower involvement levels, with 53 and 39 percent, respectively, classified as highly involved.
- Just over one-third (35 percent) of children in grades 9 through 12 had parents who were classified as having a low level of involvement, defined as having participated in one or no school activities.

Differences by Race and Hispanic Origin.[53] Parents of white children were more likely than parents of black or Hispanic children to be highly involved in their children's schools at each grade level (see Table EA 3.3).

Differences by Socioeconomic Status. Children living in non-poor households were much more likely to have highly involved parents than children living in poor households, for all grade levels. Children whose mothers had higher levels of education had more highly involved parents than children whose mothers had lower education levels, at all grades (see Table EA 3.3).

Differences by Family Structure. Children in two-parent families were more likely than children in single-parent families to have parents who were highly involved in school activities. For example, among students in grades 3 through 5, 74 percent of children with two parents had parents who were highly involved in their schools, compared with 60 percent of children with one or no parent (see Table EA 3.3).

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[50] Zill, N., and Nord, C.W. 1994. *Running in Place: How American Families Are Faring in a Changing Economy and Individualistic Society.* Washington, D.C.: Child Trends.

[51] Nord, C.W., Brimhall, D., and West, J. 1997. *Fathers' Involvement in Their Children's Schools.* NCES 98-091. Washington, D.C.: National Center for Education Statistics.

[52] The level of involvement depends on the number of different activities reported by the parents, ranging from 0 or 1 (low involvement) to 2 (moderate involvement) to 3 or more activities (high involvement). Note that the number of times that the parent has been involved in each activity was not measured.

[53] Estimates for whites and blacks exclude Hispanics of those races.

Among children in two-parent families, mothers were more likely to be highly involved than fathers. For example, in 1996, about half of students in grades 6 through 8 had highly involved mothers, but only one-quarter had highly involved fathers (see Table EA 3.3).

Children in single-mother families were somewhat less likely to have highly involved mothers (45 percent for grades 6 through 8) than comparable children in two-parent families (51 percent). However, children in single-father families were more likely to have a highly involved father (52 percent for grades 6 through 8) than comparable children in two-parent families (25 percent).

Differences by Mother's Employment Status. Children in grades 3 through 8 and whose mothers worked part-time (less than 35 hours per week) had more highly involved parents than 3rd- through 8th-graders whose mothers either worked full-time (35 hours or more per week) or who were not in the labor force. For instance, 81 percent for children in grades 3 through 5 whose mothers worked part-time had parents who were classified as highly involved, compared with 67 percent of mothers worked full-time and 66 percent of children whose mothers were not in the labor force (see Table EA 3.3). Among children in grades 9 through 12, those whose mothers were in the labor force had more highly involved parents than children whose mothers were not in the labor force (see Table EA 3.3).

Table EA 3.3

Percentage of children in the United States whose parents are involved in their schools, by level of involvement,[a] grade, and child and family characteristics: 1996

	Low Involvement			Moderate Involvement			High Involvement		
	Grades 3 - 5	Grades 6 - 8	Grades 9 - 12	Grades 3 - 5	Grades 6 - 8	Grades 9 - 12	Grades 3 - 5	Grades 6 - 8	Grades 9 - 12
Total	11	21	35	19	26	26	69	53	39
Gender									
Male	12	22	35	19	27	27	69	51	38
Female	11	20	35	19	26	25	70	54	40
Race and Hispanic origin[b]									
White non-Hispanic	8	17	32	18	25	26	74	57	43
Black non-Hispanic	20	28	42	22	31	27	59	41	31
Hispanic	15	29	44	24	28	28	60	43	28
Poverty status									
At or above poverty	8	17	32	18	26	26	74	57	42
Below poverty	21	35	51	24	28	25	56	38	24
Family structure[c]									
Two parents	9	18	31	18	26	26	74	56	43
Mother	12	22	36	19	27	26	68	51	39
Father	43	50	54	26	26	23	31	25	23
One or no parent[d]	16	29	45	24	26	26	60	45	30
Mother-only	15	27	43	24	28	25	61	45	32
Father-only	*	31	40	27	18	33	58	52	27
Nonparent guardian(s)	*	38	55	*	*	27	57	39	17
Mother's education level[e]									
Less than high school	32	43	58	25	28	22	43	29	19
High school/GED	11	24	41	24	30	27	66	46	33
Vocational/technical or some college	8	15	31	17	26	26	75	58	43
College graduate	3	10	17	11	21	25	86	70	58
Mother's employment status[e]									
35 hours or more per week	11	20	33	22	27	26	67	53	41
Less than 35 hours per week	7	16	31	13	25	23	81	59	47
Not in labor force	15	25	42	20	28	27	66	48	32

* = sample size is insufficient to permit a reliable estimate.

[a] Low involvement = involvement in 0 or 1 activity

Moderate involvement = involvement in 2 activities

High involvement = involvement in 3 or more activities

Possible activities include (1) attending general school meetings, (2) going to a regularly scheduled parent-teacher conference, (3) attending a school or class event, and (4) volunteering at the school or serving on a school committee.

[b] Persons of Hispanic origin may be of any race.

[c] Parents include any combination of a biological, adoptive, step-, and foster mother and/or father. No parents in the household indicates that the child is living with nonparent guardians (e.g., grandparents).

[d] Estimates for single parent households may include involvement of other adults living in the household.

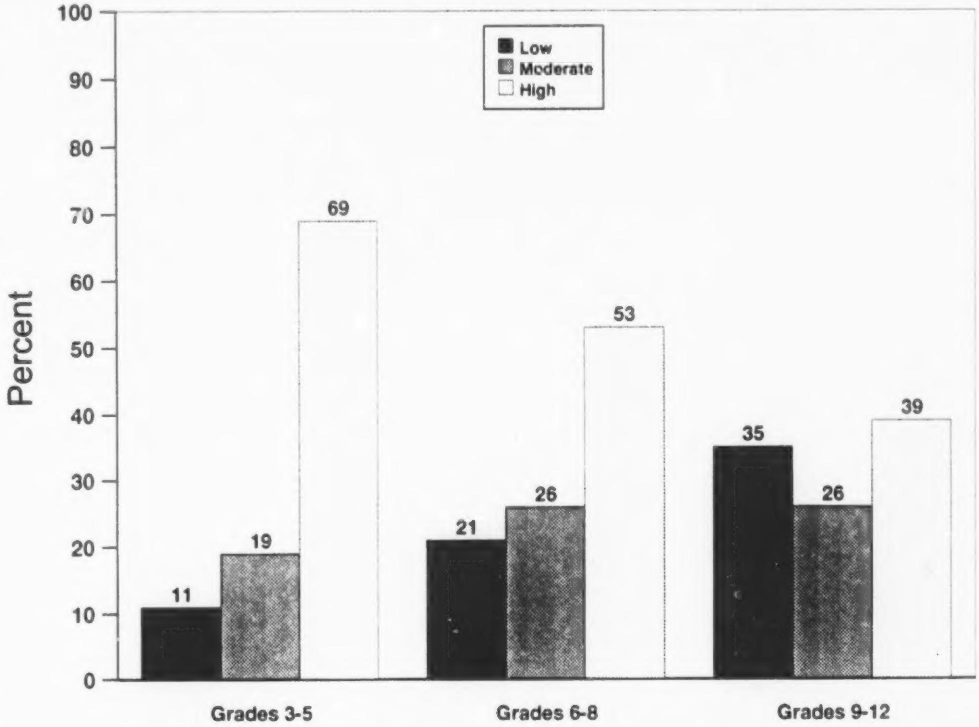
[e] Children without mothers in the home are not included in estimates of mother's education or mother's employment status. A mother is defined as a biological mother, adoptive mother, stepmother, foster mother, or female guardian (e.g., grandmother) who resides in the home with the child.

Note: Because of rounding, percents may not add to 100.

Source: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey. Tabulated by U.S. Department of Education, National Center for Education Statistics (unpublished).

Figure EA 3.3

Percentage of parental involvement[a] in child's school activities by grade level, in the United States: 1996



[a] Low involvement = involvement in 0 or 1 activity

Moderate involvement = involvement in 2 activities

High involvement = involvement in 3 or more activities

Possible activities include (1) attending general school meetings, (2) going to a regularly scheduled parent-teacher conference, (3) attending a school or class event, and (4) volunteering at the school or serving on a school committee.

Source: U.S. Department of Education, National Center for Education Statistics, 1996 National Household Education Survey. Tabulated by U.S. Department of Education, National Center for Education Statistics (unpublished).

EA 3.4

DIFFICULTY SPEAKING ENGLISH

Difficulty speaking English may limit children's educational progress and their future employment prospects. Children may also need special instruction in school to improve their English. Difficulty speaking English is most common among immigrant children and U.S.-born children of immigrants. In the past three decades, the great majority of immigrants to the United States have come from Asia, Latin America, and the Caribbean.

In 1995, of the 6.7 million children ages 5 through 17 in the United States who spoke a language other than English at home, 2.4 million (36.5 percent) had difficulty speaking English. This represents a 3.8 percentage point increase from the proportion of similar children who had difficulty speaking English in 1979 (see Table EA 3.4). While the proportion of all children experiencing difficulty speaking English nearly doubled between 1979 and 1995, this group constituted only 5.1 percent of the total population of children ages 5 through 17 in 1995 (see Table EA 3.4).

Differences by Race and Hispanic Origin.[54] Children of Hispanic or "other" ethnic origin are more likely than black or white children to have difficulty speaking English. For example, in 1995, 31.0 percent of all Hispanic children and 14.1 percent of children of "other" races (including Asians) had difficulty speaking English, compared with about 1 percent of black and white children. These differences are due in part to the fact that Hispanic and Asian children are more likely than whites or blacks to speak another language in the home (see Table EA 3.4). Nearly one-third (31.8 percent) of non-Hispanic black children from homes where a language other than English was spoken had difficulty speaking English in 1995 (see Figure EA 3.4), an increase from 25.6 percent in 1979. Among Hispanic children from such homes, 41.9 percent had difficulty speaking English. Nineteen percent of non-Hispanic white children from homes where a language other than English was spoken had difficulty speaking English in 1995. The proportion was similarly low in 1979, 1989, and 1992 for these children.

Differences by Region. The percentage of children who speak another language at home varies substantially by geographic region, ranging from 5.9 percent in the Midwest to 26.4 percent in the West in 1995. Further, in the West more than 1 in 10 children have difficulty speaking English, compared to 2.3 percent in the Midwest.

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[54] Estimates for whites and blacks exclude Hispanics of those races.

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Table EA 3.4

Difficulty speaking English: children ages 5 to 17 who speak a language other than English at home and who are reported to have difficulty speaking English,[a] by race and Hispanic origin[c] and by region: selected years, 1979-1995

	1979	1989	1992	1995[b]
Children who speak another language at home				
Number (in thousands)	3,825	5,293	6,375	6,656
Percentage of children ages 5-17	8.5	12.6	14.2	14.1
Race and Hispanic origin				
White, non-Hispanic	3.2	3.5	3.7	3.6
Black, non-Hispanic	1.3	2.4	4.2	3.0
Hispanic[c]	75.1	71.2	76.6	73.9
Other, non-Hispanic[d]	44.1	53.4	58.3	45.5
Region[e]				
Northeast	10.5	13.5	16.2	15.1
Midwest	3.7	4.9	5.6	5.9
South	6.8	10.7	11.1	11.7
West	17.0	24.2	27.2	26.4
Children who have difficulty speaking English				
Number (in thousands)	1,250	1,850	2,178	2,431
Percentage of children ages 5-17	2.8	4.4	4.9	5.1
Race and Hispanic origin				
White, non-Hispanic	0.5	0.8	0.6	0.7
Black, non-Hispanic	0.3	0.5	1.3	0.9
Hispanic[c]	28.7	27.4	29.9	31.0
Other, non-Hispanic[d]	19.8	20.4	21.0	14.1
Region[e]				
Northeast	2.9	4.8	5.3	5.0
Midwest	1.1	1.3	1.6	2.3
South	2.2	3.8	3.5	3.4
West	6.5	8.8	10.4	11.4
Percentage of those speaking another language at home who have difficulty speaking English	32.7	34.9	34.2	36.5
Race and Hispanic origin				
White, non-Hispanic	17.3	22.6	17.2	19.0
Black, non-Hispanic	25.6	22.5	31.0	31.8
Hispanic[c]	38.2	38.5	39.0	41.9
Other, non-Hispanic[d]	44.9	38.1	36.1	31.1

[a] Respondents were asked if the children in the household spoke a language other than English at home and how well they could speak English. Categories used for reporting were "Very well," "Well," "Not well," and "Not at all." All those reported to speak English less than "Very well" were considered to have difficulty speaking English, based on an evaluation of the English-speaking ability of a sample of the children in the 1980s.

[b] Numbers in this year may reflect changes in Current Population Survey because of newly instituted computer-assisted interviewing techniques and/or because of the change in the population controls to the 1990 Census-based estimates, with adjustments.

[c] Persons of Hispanic origin may be of any race.

[d] Most in this category are Asian/Pacific Islanders, but American Indian/Alaska Native children also are included.

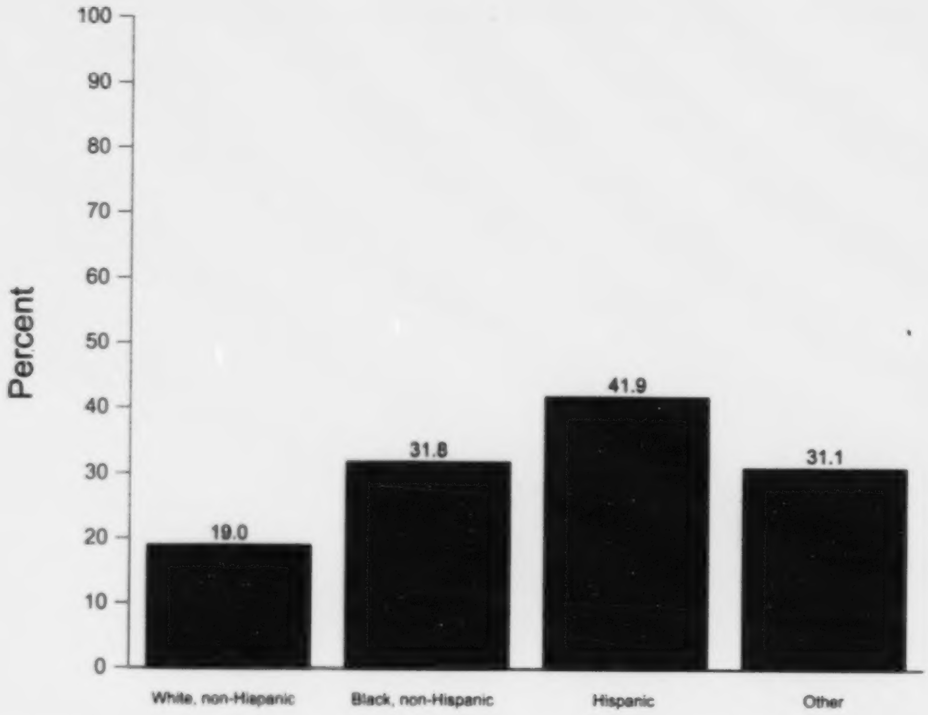
[e] Regions: Northeast includes Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Midwest includes Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. South includes Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. West includes Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Note: The data for racial and ethnic groups may differ slightly from those published in 1998 in this volume due to a change in programming. All nonresponses to the language questions are excluded from the tabulations.

Source: National Center for Education Statistics. Tabulations based on October 1992 and 1995 and November 1979 and 1989 Current Population Surveys, U.S. Bureau of the Census. As published in Federal Interagency Forum on Child and Family Statistics. 1998. *America's Children: Key National Indicators of Well-Being, 1998.* Washington, D.C.: U.S. Government Printing Office, Table POP4.

Figure EA 3.4

Percentage of children ages 5 through 17 in the United States who speak a language other than English at home and who are reported to have difficulty speaking English,[a] by race and Hispanic origin:[b] 1995



[a] Parents were asked if their child spoke a language other than English at home and how well the child could speak English. Categories used for reporting were "Very well," "Well," "Not well," and "Not at all." All children who were reported to speak below the level of "Very well" were considered to have difficulty speaking English.

[b] Persons of Hispanic origin may be of any race.

Source: National Center for Education Statistics. Tabulations based on October 1992 and 1995 and November 1979 and 1989 Current Population Surveys, U.S. Bureau of the Census. As published in Federal Interagency Forum on Child and Family Statistics. 1998. *America's Children: Key National Indicators of Well-Being 1998.* Washington, D.C.: U.S. Government Printing Office, Table POP4.

EA 3.5

STUDENT COMPUTER USE

Computer literacy has become increasingly important for success in the workplace. Computers have become an essential tool for retrieving and manipulating information, for producing reports, and for communicating with colleagues. The extent to which children have access to computers, and the uses children make of computers, may be an indicator of how well prepared students will be to enter an increasingly technological workplace.

Tables EA 3.5.A and EA 3.5.B present data on the frequency of and reason for computer use by children in grades 4, 8, and 11. A review of these tables reveals the following general trends:

- The percentage of 4th-, 8th-, and 11th-graders who reported using a computer at school at least once a week increased substantially between 1984 and 1996 (see Table EA 3.5.A). For example, 50 percent of 11th-graders reported using a computer at school at least once a week in 1996, compared with 24 percent in 1984.
- The percentage of students who reported using computers at home or at school for scholastic activities (e.g., learning and writing) increased dramatically between 1984 and 1996 for students in all three grades (see Table EA 3.5.B). For example, the percentage of 11th-graders who reported using a computer to write stories or papers increased from 19 percent in 1984 to 96 percent in 1996. Similarly, 55 percent of 11th-graders reported using computers to learn things in 1984, compared with 80 percent in 1996. In 1996, the percentage of students using computers for learning and writing approached or surpassed the percentage who used computers for playing games in all three grades (see Table EA 3.5.B).

Differences by Grade. Younger students were more likely than older students to report computer use at school (see Table EA 3.5.A). In 1996, 72 percent of students in grade 4 reported using computers at school at least once a week, compared to 47 percent of 8th-graders and 50 percent of 11th-graders (see Figure EA 3.5.A). However, 8th- and 11th-graders were more likely than 4th-graders to report using a computer every day (see Table EA 3.5.A).

Differences by Family Income.[55] Data from the Current Population Survey indicate that students from high-income families were more likely than students from middle- and low-income families to report using a computer at home or at school (see Table EA 3.5.C). However, family income appears to have a stronger impact on children's exposure to computers at home than at school. For example, in 1993, the rate of computer usage at home was only 6 percent for students in grades 7-12 from low-income families, compared with 55 percent for students from high-income families in the same grades. The corresponding computer usage rates at school were 53 percent and 66 percent for students in grades 7-12 from low-income and high-income families, respectively (see Table EA 3.5.C).

Increases in computer usage between 1984 and 1993 followed a similar pattern. Computer usage at school increased by large amounts regardless of family income levels for children in both grades 1-6 and 7-12. However, the increase in the percentage of students from high-income families who reported using a computer at home was substantially greater than for students from low- and middle-income families. For example, 55 percent of students in grades 7-12 from high-income families reported using a computer at home in 1993 compared with 26 percent in 1984, an increase of 29 percentage points (see Figure EA 3.5.B). In contrast, computer use at home increased by only 2 percentage points for low-income students in grades 7-12 between 1984 and 1993 (see Figure EA 3.5.B).

[55] Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in between.

Table EA 3.5.A

Percentage of students who reported using a computer at school, by grade and frequency of use: selected years, 1984-1996

	Grade 4						Grade 8					
Frequency of use	1984	1988	1990	1992	1994	1996	1984	1988	1990	1992	1994	1996
Never	61	30	19	17	14	11	67	42	41	38	28	23
Ever	39	70	81	84	86	89	33	58	60	62	72	77
At least once a week	26	53	67	62	70	72	16	36	40	38	46	47
At least twice a week	11	19	26	25	31	36	8	22	27	26	29	33
Every day	3	4	8	6	8	10	4	10	11	11	15	17

	Grade 11					
Frequency of use	1984	1988	1990	1992	1994	1996
Never	55	45	45	27	26	16
Ever	45	55	55	73	74	84
At least once a week	24	31	29	41	43	50
At least twice a week	18	25	22	31	35	35
Every day	12	15	14	19	23	18

Note: Details may not add to 100 percent due to rounding.

Source: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress. 1988. *Almanac: Writing, 1984 to 1996.* As published in *The Condition of Education 1998.* NCES 98-013. U.S. Department of Education, Office of Education Research and Improvement, Washington, D.C.: U.S. Government Printing Office, p. 38. Some tabulations performed by Child Trends.

Table EA 3.5.B (Part 1)

Percentage of students who use a computer at home or at school, by grade and reason for use: selected years, 1984-1996

	Grade 4						Grade 8					
Reason for use	1984	1988	1990	1992	1994	1996	1984	1988	1990	1992	1994	1996
To play games	72	79	85	83	87	90	84	85	84	85	87	89
To learn things	68	70	76	83	82	88	58	74	71	73	76	83
To write stories or papers	23	40	49	57	68	79	15	58	61	73	82	91

	Grade 11					
Reason for use	1984	1988	1990	1992	1994	1996
To play games	76	79	79	78	77	84
To learn things	55	65	65	72	71	80
To write stories or papers	19	61	69	84	87	96

Note: Details may not add to 100 percent due to rounding.

Source: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress. 1998. *Almanac: Writing, 1984 to 1996*. As published in *The Condition of Education 1998*. NCES 98-013. U.S. Department of Education, Office of Education Research and Improvement, Washington, DC: U.S. Government Printing Office, p. 38.

Table EA 3.5.C (Part 1)

Percentage of students who reported using a computer at school or at home, by grade level and family income:[a] 1984, 1989, and 1993

Location of Computer Use	Total 1984	Total 1989	Total 1993	Low 1984	Low 1989	Low 1993
Grades 1-6						
At home	12	17	24	3	3	4
At school	31	54	70	19	41	60
At school or home	37	59	74	21	42	61
Grades 7-12						
At home	14	23	30	4	7	6
At school	31	47	61	22	42	53
At school or home	39	57	70	24	45	55

Location of Computer Use	Middle 1984	Middle 1989	Middle 1993	High 1984	High 1989	High 1993
Grades 1-6						
At home	10	14	19	25	35	51
At school	30	54	69	43	64	78
At school or home	35	58	73	55	73	87
Grades 7-12						
At home	11	18	24	26	41	55
At school	30	46	61	36	51	66
At school or home	36	54	68	50	69	83

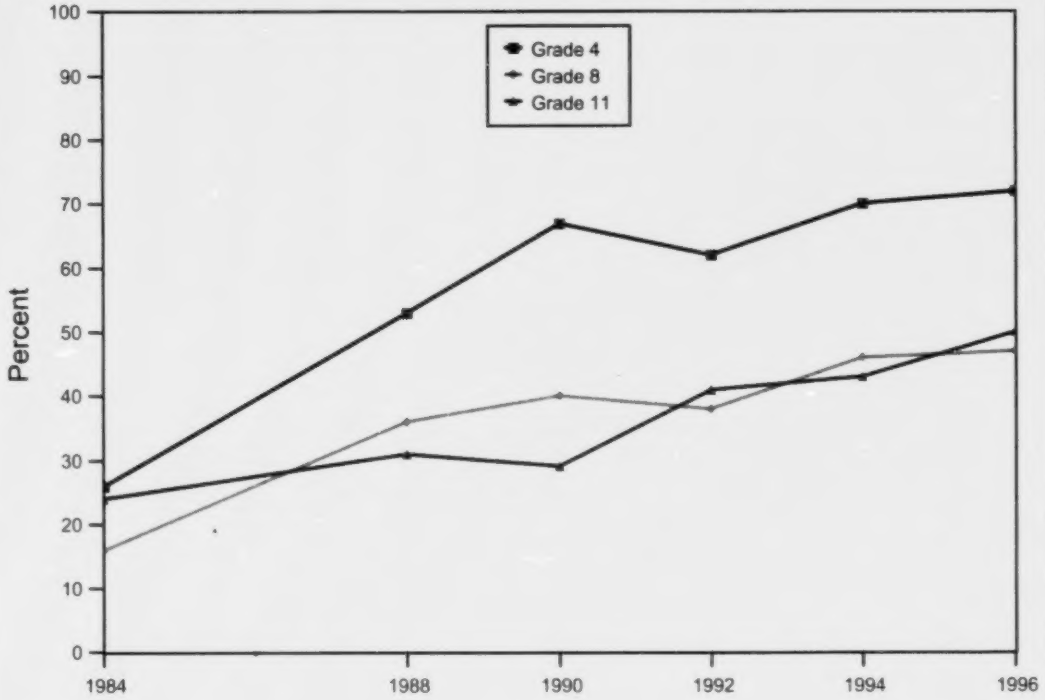
[a] Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in between.

Note: Data shown in this table are from the Current Population Survey (CPS). The CPS is household-reported data, while the NAEP Almanac data shown in other tables in this analysis are student-reported data. Therefore, data in this table are not comparable to data shown in the other tables of the analysis (Tables EA 3.5.A and EA 3.5.B).

Source: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys (CPS). As published in *The Condition of Education 1998.* NCES 98-013. U.S. Department of Education, Office of Education Research and Improvement, Washington, D.C.: U.S. Government Printing Office, Table 3-1.

Figure EA 3.5.A

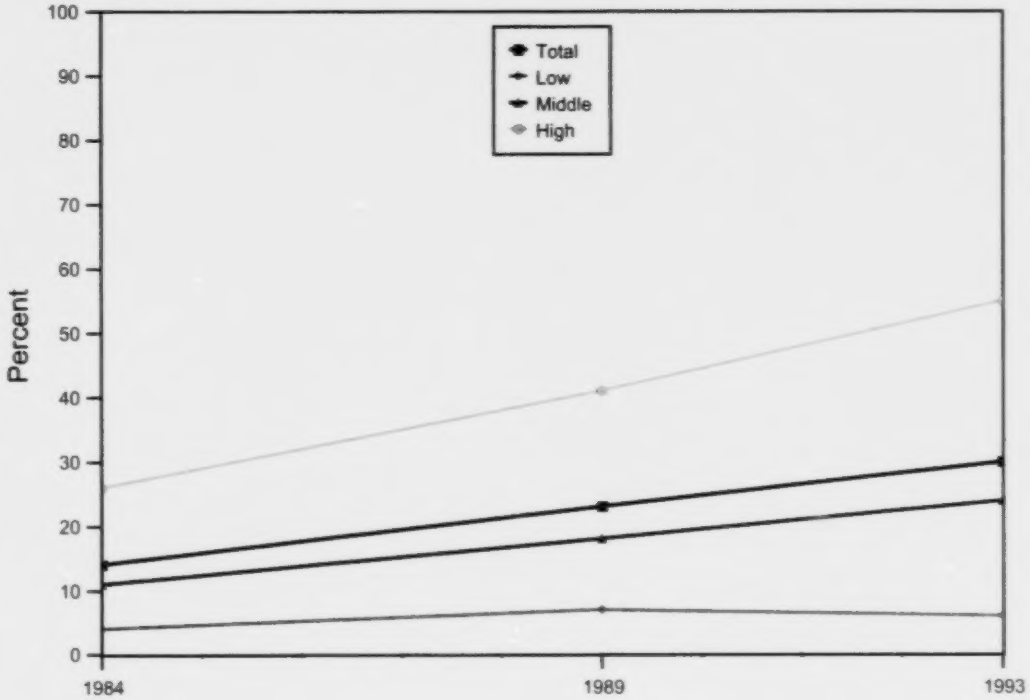
Percentage of students who reported using a computer at school at least once a week, by grade level: selected years, 1984-1996



Source: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress. *Almanac: Writing, 1998.* As published in *The Condition of Education 1998.* NCES 98-013. U.S. Department of Education, Office of Education Research and Improvement, Washington, D.C.: U.S. Government Printing Office, p. 38. Some tabulations performed by Child Trends.

Figure EA 3.5.B

Percentage of students in grades 7-12 who reported using a computer at home, by family income:[a] 1984, 1989, and 1993



[a]Low income is the bottom 20 percent of all family incomes; high income is the top 20 percent of all family incomes; and middle income is the 60 percent in between.

Note: Data shown in this figure are from the Current Population Survey (CPS). The CPS is household-reported data, while the NAEP Almanac data shown in other tables and figure EA 3.5.A in this analysis are student-reported data. Therefore, data in this figure are not comparable to data shown in Table EA 3.5.A, Table EA 3.5.B, and Figure EA 3.5.A.

Source: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys (CPS). As published in *The Condition of Education 1998.* NCES 98-013. U.S. Department of Education, Office of Education Research and Improvement, Washington, D.C.: U.S. Government Printing Office, Table 3-1.

PART 2

Changes in Risk-Taking among High School Students, 1991-1997:

Evidence from the Youth Risk Behavior Surveys

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Changes in Risk-Taking among High School Students, 1991-1997: Evidence from the Youth Risk Behavior Surveys

A handful of preventable health-risk behaviors—violence, substance use, suicide, and sexual activity—are responsible for much of the mortality and morbidity experienced in adolescence and early adulthood.[1] Adolescents' participation in many of these health-risk behaviors has changed in recent years. Newspapers report increases in marijuana use among high school students one day and declines in their sexual or criminal activity another. Because changes in the prevalence of specific health-risk behaviors vary, some increasing and some declining, shifts in adolescents' overall exposure to health-risks are difficult to pinpoint. While it is well established that many risk behaviors co-occur—teens who engage in one are likely to engage in another[2] —changes in the extent and patterns of multiple risk-taking are unknown.

The purpose of this chapter is to identify changes in overall risk-taking among high school students during the recent decade. As background, we show changes in the prevalence of specific risk behaviors between 1991 and 1997. The second, and central, part of this investigation is an examination of the patterns of and changes in high school students' multiple risk-taking over this period. This information is an important part of understanding adolescents' overall exposure to health-risks and monitoring efforts to reduce those risks.

Measuring Health Risk Behaviors

Using nationally representative data from students in grades 9 to 12 from the national Youth Risk Behavior Surveys (YRBS) of 1991, 1993, 1995, and 1997, we examine changes in high school students' participation in health-risk behaviors. The surveys are designed to track changes in behavior over time among high school students, using comparable measures and samples in each year (box 1). These changes are measured at the aggregate level; the surveys cannot monitor changes over time in an individual student's behavior.

Box 1

Design of the Youth Risk Behavior Survey

The Youth Risk Behavior Survey is conducted by the Centers for Disease Control and Prevention to assess the behaviors deemed most responsible for influencing health among high school students in the United States.[1] In 1991, 1993, 1995, and 1997, biennial school-based surveys were conducted nationally. Each of the four surveys used a similar design to obtain a nationally representative sample of students in grades 9 through 12, representing all public and private high school students in the 50 states and the District of Columbia. Details of the sample design for each of the four surveys are described elsewhere.[2] State and local-based surveys similar to the Youth Risk Behavior Survey are conducted by state and local education agencies as part of a larger surveillance effort. Only the national surveys are examined here.

All students in selected classes within each sampled school were eligible to participate. The self-administered questionnaires, containing approximately 90 items, were completed by students in the classroom during a regular class period. Students recorded their responses directly on a computer-scannable form. The surveys were designed to protect privacy and allow for anonymous participation. Overall response rates in 1991, 1993, 1995, and 1997 were 68 percent, 70 percent, 60 percent, and 69 percent, respectively; the sample sizes were 12,272 students, 16,296 students, 10,904 students, and 16,262 students, respectively.

[1] Kolbe, L.J., L. Kann, and J.L. Collins. 1993. "Overview of the Youth Risk Behavior Surveillance System." *Public Health Report* 108 (supp. 1): 2–10.

[2] Kann, L., W. Warren, B. Collins, and L.J. Kolbe. 1993. "Results from the National School-Based 1991 Youth Risk Behavior Survey and Progress toward Achieving Related Health Objectives for the Nation." *Public Health Report* 108 (supp. 1): 47–67; Centers for Disease Control and Prevention. 1995. "Youth Risk Behavior Surveillance: United States, 1993." *Morbidity and Mortality Weekly Report*, 44 (SS-1): 1–56; Centers for Disease Control and Prevention. 1996. "Youth Risk Behavior Surveillance: United States, 1995." *Morbidity and Mortality Weekly Report* 45 (SS-4): 1–84; Centers for Disease Control and Prevention. 1998. "Youth Risk Behavior Surveillance: United States, 1997." *Morbidity and Mortality Weekly Report* 47 (SS-3): 1–8.

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[1] Sells, C.W., and R.W. Blum. 1996. "Morbidity and Mortality among U.S. Adolescents: An Overview of Data and Trends." *American Journal of Public Health* 86: 513–19.

[2] Osgood, D.W. 1991. *Covariation among Adolescent Problem Behaviors.* Report prepared for U.S. Office of Technology Assessment (OTA). Washington, D.C.: OTA; Donovan, J.E., and R. Jessor. 1985. "Structure of Problem Behavior in Adolescence and Young Adulthood." *Journal of Counseling and Clinical Psychology* 53: 890–904.

We identify 10 specific health-risk behaviors: regular alcohol use, binge drinking, regular tobacco use, marijuana use, cocaine use, physical fighting, carrying a weapon, suicidal thoughts, suicide attempt, and sexual intercourse (see table 1 for complete definitions). While these behaviors do not comprise an exhaustive list of adolescent health-risks, they reflect areas of critical public concern.[3] The consequences associated with these 10 behaviors vary considerably, but each poses a range of potential immediate and long-term health problems.

Table 1

Definition of Health Risk Behaviors as Measured in YRBS

Behavior	Definition
Regular Alcohol Use:	Had a drink on three or more days during the past 30 days.
Regular Binge Drinking:	Had five or more drinks within a couple of hours on three or more days during the past 30 days.
Regular Tobacco Use:	Smoked a cigarette daily during the past 30 days.
Marijuana Use:	Smoked marijuana at least once during the past 30 days.
Cocaine Use:	Used cocaine or crack at least once during the past 30 days.
Physical Fighting:	Was in a physical fight at least once during the past 12 months.
Weapon Carrying:	Carried a gun, knife, or other weapon at least once during the past 30 days.
Suicidal Thoughts:	Seriously considered attempting suicide in the past 12 months.
Suicide Attempt:	Attempted suicide in the past 12 months.
Sexual Intercourse:	Ever had sexual intercourse.

YRBS is an important national data source for monitoring levels and changes in adolescent health.[4] However, measures from the YRBS will not necessarily yield the same estimated prevalence of risk behaviors as other surveys do, given differences in samples, questionnaire details, and survey administration. For example, the YRBS is administered in school; other studies suggest that in-school surveys tend to obtain higher estimates of adolescent risk taking than household surveys.[5] In addition, normal sampling variance and measurement error are likely to result in some differences between surveys. While the findings of this study should not be expected to precisely match estimates from other samples, YRBS provides an internally consistent source of data on a range of adolescent risk behaviors for examination of changes over time. This chapter focuses on changes between 1991 and 1997.

All tables and figures in this chapter are descriptive in nature. They describe associations only; causal inferences should not be drawn. Establishing that one behavior occurs with another does not mean that one causes the other. In addition, all behaviors are not measured with reference to the same time period. Questions about substance use and weapon-carrying refer to the 30 days prior to the survey; those about suicidal thoughts, suicide attempts, and fighting refer to the year before the survey; and sexual intercourse is a lifetime measure.

[3] For further information on changes in other health-risk behaviors measured in the YRBS, see *Fact Sheet: Youth Risk Behavior Trends*, http://www.cdc.gov/nccdphp/dash/yrbs/trend.htm, accessed 7/9/99.

[4] National Center for Health Statistics. 1999. *Healthy People 2000 Review, 1998-99.* Hyattsville, MD: Public Health Service.

[5] Santelli, J., Lindberg, L.D., Abma, J., Sucoff, C. and Resnick, M. 1999. "A Comparison of Estimates and Trends in Adolescent Sexual Behaviors in Four Nationally Representative Surveys" presented at the 1999 Annual Meeting of the Population Association of America; Horm, J., Cynamon, M., and Thornberry, O. 1996. "The Influence of Parental Presence on the Reporting of Sensitive Behaviors by Youth", *Health Survey Research Methods Conference Proceedings.* Hyattsville, MD: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Health Statistics; U.S. Department of Health and Human Services. 1994. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General.* Atlanta, Georgia: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

Changes in Single Risk Behaviors

The 1990s have been a period of substantial change, some good and some bad, in students' participation in specific health-risk behaviors.

Between 1991 and 1997, substantial changes occurred in students' participation in key health-risk behaviors.[6] For example, there was an unprecedented but modest decline in the proportion of students with past sexual experience (figure 1.A). This reduction in sexual activity, and changes in contraceptive use, were accompanied by declines in the teen pregnancy rate, birthrate, and sexually transmitted disease rate.[7] Declines in fighting and weapon-carrying parallel positive changes in associated health outcomes.[8] For example, the youth homicide rate dropped between 1994 and 1996 after more than a decade of substantial increase.[9] Deaths due to firearms, the primary source of youth homicide, also declined.[10]

The proportion of high school students who reported thinking about suicide dropped from 29 percent in 1991 to 21 percent in 1997. Unfortunately, decreases in the prevalence of suicidal thoughts were not accompanied by changes in suicide attempts (figure 1.B). The prevalence of suicide attempts among students remained stable over the same period. Death registration records reveal little change in the rate of suicide-related mortality among adolescents during this period, paralleling the stable rate of suicide attempts among high school students.[11]

Garnering much public attention are the substantial increases in marijuana and cocaine use among high school students between 1991 and 1997. The share of students who reported marijuana use in the last 30 days increased from 15 percent to 26 percent (figure 1.C). Cocaine use, while far less common, increased from 2 percent to 3 percent. Rates of regular tobacco use also increased slightly,[12] while the prevalence of regular alcohol use and binge drinking remained stable. Regular alcohol use was the most common type of substance use reported by high school students in both 1991 and 1997. However, with the large increases in the prevalence of marijuana use, marijuana became almost as common as regular alcohol use in 1997.

[6] The change from 1991 to 1997 had to be statistically significant ($p < .05$) when included in a multivariate model that controlled for the distribution of students by gender, grade, and race/ethnicity. Intermediate changes may have also occurred, but are not examined here. Significance tests were calculated to adjust for the complex sampling design of the YRBS. All estimates are weighted to adjust for students' nonresponse and the oversampling of black and Hispanic students.

[7] For declines in teen births, see Ventura, S.J., et al. 1998. *Teenage Births in the United States: National and State Trends, 1991–97.* Hyattsville, Md.: U.S. National Center for Health Statistics. For declines in teen pregnancy, see Henshaw, S. 1999. *Teenage Pregnancy: Overall Trends and State-by-State Information.* New York: The Alan Guttmacher Institute. For declines in sexually transmitted diseases among adolescents, see Centers for Disease Control and Prevention (CDC). 1998. *Sexually Transmitted Disease Surveillance.* Atlanta, GA: CDC. For increases in condom use among adolescents, see Sonenstein, F.L., et al. 1998. "Changes in Sexual Behavior and Condom Use among Teenaged Men: 1988 to 1995." *American Journal of Public Health* 88 (6): 956–59. For increases in condom use among adolescents, see Sonenstein, F.L., et al. 1998. "Changes in Sexual Behavior and Condom Use among Teenaged Men: 1988 to 1995." *American Journal of Public Health* 88 (6): 956–59. For increases in condom use among adolescents, see Sonenstein, F.L., et al. 1998. "Changes in Sexual Behavior and Condom Use among Teenaged Men: 1988 to 1995." *American Journal of Public Health* 88 (6): 956–59. Also see Kaufmann, R.B., et al. 1998. "The Decline in U.S. Teen Pregnancy Rates, 1990–1995." *Pediatrics* 102 (5): 1141–47.

[8] For more extensive information on recent changes in other violence-related behaviors among high school students, see Brener, N.D., et al. 1999. "Recent Trends in Violence-Related Behaviors among High School Students in the United States." *Journal of the Americen Medical Association* 282 (5): 440–46.

[9] U.S. Department of Health and Human Services (DHHS). Office of the Assistant Secretary for Planning and Evaluation. 1998. *Trends in the Well-Being of America's Children and Youth.* Table HC 1.4A, p. 143.

[10] DHHS. Office of the Assistant Secretary for Planning and Evaluation.1998. Trends in the Well-Being of America's Children and Youth. Table HC 1.4B, p. 144.

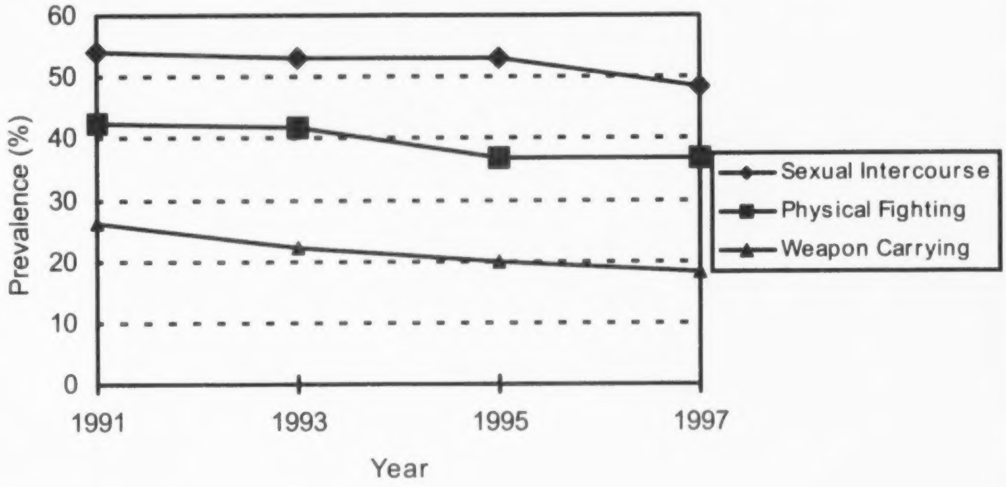
[11] DHHS. Office of the Assistant Secretary for Planning and Evaluation. 1998. *Trends in the Well-Being of America's Children and Youth.* Table HC 1.5, p. 149.

[12] The YRBS reports significant increases in current cigarette smoking (at least once in the 30 days preceding the survey), from 27.5 percent in 1991 to 36.4 percent in 1997. CDC. 1999. *Fact Sheet: Youth Risk Behavior Trends.* http://www.cdc.gov/nccdphp/dash/yrbs/trend.htm, accessed 7/9/99.

More recent data from another national survey of high school students, Monitoring the Future, suggests that rates of substance use among students are leveling off, or even declining, after a period of increase. Daily cigarette smoking among 10th- and 12th-grade students declined by 2.2 percentage points between 1997 and 1998, while the prevalence of illicit drug (including marijuana) and alcohol use remained stable after increasing significantly during the early to mid-1990s.[13] Future analyses will determine if the next wave of the YRBS, collected in spring 1999 (and not yet available), will reveal these same changes.

Figure 1.A

Prevalence of Sexual Experience and Violent Behaviors among Students in 9th-12th Grade, 1991-1997



Source: Author's tabulations from 1991, 1993, 1995, and 1997 Youth Risk Behavior Surveys.

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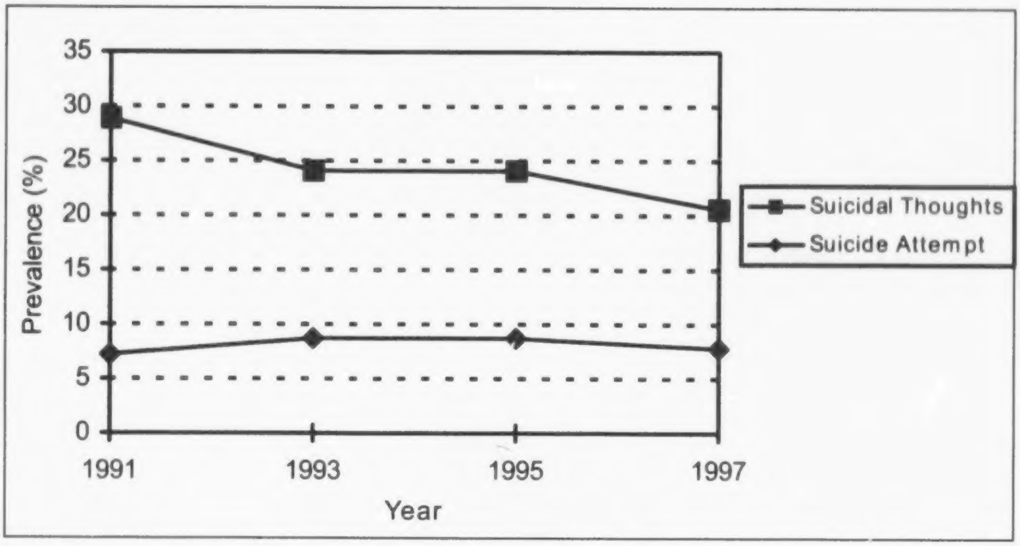
[13] Johnston, L.D., O'Malley, P.M., and Bachman, J.G. 1998. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1997.* Rockville, MD: National Institutes of Health. National Institute on Drug Abuse, NIH Pub. No. 98-4345. Institute for Social Research, University of Michigan.

Figure 1.B

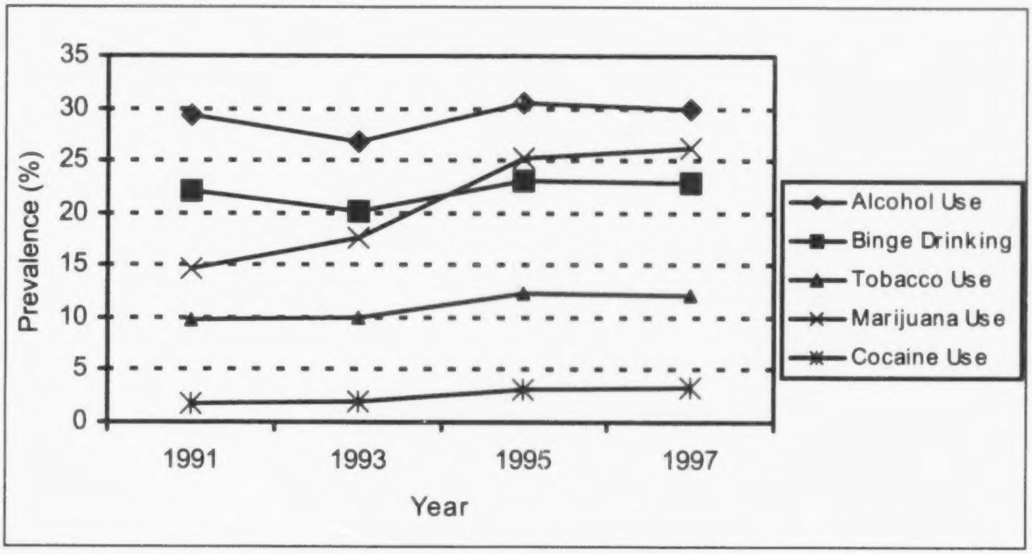
Prevalence of Suicidal Behaviors among Students in 9th-12th Grade, 1991—1997



Source: Authors' tabulations from 1991, 1993, 1995, and 1997 Youth Risk Behavior Surveys.

Figure 1.C

Prevalence of Substance Use among Students in 9th-12th Grade, 1991—1997



Source: Authors' tabulations from 1991, 1993, 1995, and 1997 Youth Risk Behavior Surveys.

Differences by Grade, Gender, and Race

Data from 1991 and 1997 are examined further in table 2, which reports the prevalence of individual health-risk behaviors for all students in each year and also separates the behaviors by grade, gender, and race/ethnicity. Here, we highlight key demographic differences in the changes between 1991 and 1997.

GRADE: In both years, students in grades 11 and 12 were more likely than students in other grades to engage in substance use and sexual activity, while students in grades 9 and 10 had higher prevalences of suicidal and violent behaviors. Changes in the share of students having ever engaged in sexual intercourse differed by grade, falling more sharply among students in grades 11 and 12 (from 65 percent to 56 percent) than among students in grades 9 and 10 (from 44 percent to 40 percent). Changes in other behaviors were similar among 9th- and 10th-grade students and 11th- and 12th-grade students.

GENDER: Both genders experienced declines in some risk-taking, but the magnitude of the change differed between male and female students. Between 1991 and 1997, female students reported a 24 percent decline in the prevalence of physical fighting, compared to a 9 percent decline among male students, contributing to the existing gender difference in the prevalence of physical fighting. The share of students having ever engaged in sexual intercourse declined more among males than among females. As a result, boys in 1997 had participated in sexual intercourse at rates similar to those of girls: 49 percent compared to 48 percent.

RACE: Hispanic students did not report substantial declines in any of the 10 risk behaviors.[14] In contrast, non-Hispanic black and non-Hispanic white students reported declines in weapon-carrying, physical fighting, suicidal thoughts, and sexual intercourse. Thus, the downward shift in the risk behaviors of non-Hispanic students is responsible for the overall decline in risk behavior reported by all high school students.

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[14] Students were asked to self-identify their race/ethnicity from the following categories: "Hispanic," "White — not Hispanic," "Black — not Hispanic," "Asian or Pacific Islander," "Native American or Alaskan Native," or "Other." In 1991, 8.8 percent of students identify themselves as Hispanic, compared with 9.8 percent in 1997.

Table 2

Changes in the Prevalence of Health Risk Behaviors among High School Students by Grade, Gender, Race/Ethnicity, and Year

	Regular Alcohol Use	Regular Binge Drinking	Regular Tobacco Use	Marijuana Use	Cocaine Use
Total (%)					
1991	29.3	22.1	9.8	14.7	1.8
1997	29.8	22.9	12.2	26.2	3.3
Grade (%)					
Grades 9-10					
1991	23.3	16.3	7.6	11.5	1.3
1997	25.1	17.7	9.8	24.3	3.3
Grades 11-12					
1991	35.4	28.0	12.0	17.9	2.2
1997	34.1	27.7	14.4	27.9	3.3
Gender (%)					
Female					
1991	24.8	16.8	9.1	12.5	1.0
1997	24.9	17.3	11.3	21.5	2.4
Male					
1991	33.7	27.2	10.5	16.7	2.4
1997	34.0	27.6	13.0	30.2	4.0
Race/Ethnicity (%)					
Hispanic					
1991	30.7	20.8	4.0	14.4	3.1
1997	30.3	24.2	7.3	28.6	6.2
Non-Hispanic White					
1991	31.9	25.2	12.2	15.2	1.8
1997	32.1	26.1	14.4	25.0	3.1
Non-Hispanic Black					
1991	18.8	11.5	2.5	13.5	0.6
1997	17.9	9.4	5.5	28.2	0.7

Source: Authors' tabulations from 1991and 1997 Youth Risk Behavior Surveys.

Table 2 Part 2

Changes in the Prevalence of Health Risk Behaviors among High School Students by Grade, Gender, Race/Ethnicity, and Year

	Weapon Carrying	Physical Fighting	Suicidal Thoughts	Suicide Attempt	Sexual Intercourse
Total (%)					
1991	26.1	42.5	29.0	7.3	54.1
1997	18.3	36.6	20.5	7.7	48.4
Grade (%)					
Grades 9-10					
1991	27.1	46.7	29.3	8.4	43.7
1997	20.0	42.5	21.8	9.5	40.3
Grades 11-12					
1991	24.9	38.2	28.6	6.1	64.7
1997	16.8	31.4	19.4	6.1	55.6
Gender (%)					
Female					
1991	10.9	34.4	37.2	10.7	50.8
1997	7.0	26.0	27.1	11.6	47.7
Male					
1991	40.6	50.2	20.8	3.9	57.4
1997	27.7	45.5	15.1	4.5	48.9
Race/Ethnicity (%)					
Hispanic					
1991	25.8	41.4	26.9	7.9	53.1
1997	23.3	40.7	23.1	10.7	52.2
Non-Hispanic White					
1991	25.1	41.0	29.9	6.7	50.1
1997	17.0	33.7	19.5	6.3	43.7
Non-Hispanic Black					
1991	32.8	50.6	22.2	6.6	81.5
1997	21.7	43.0	16.4	7.3	72.7

Source: Authors' tabulations from 1991and 1997 Youth Risk Behavior Surveys.

Changes in Overall Risk-Taking

High school students reported a shift toward less overall risk-taking.

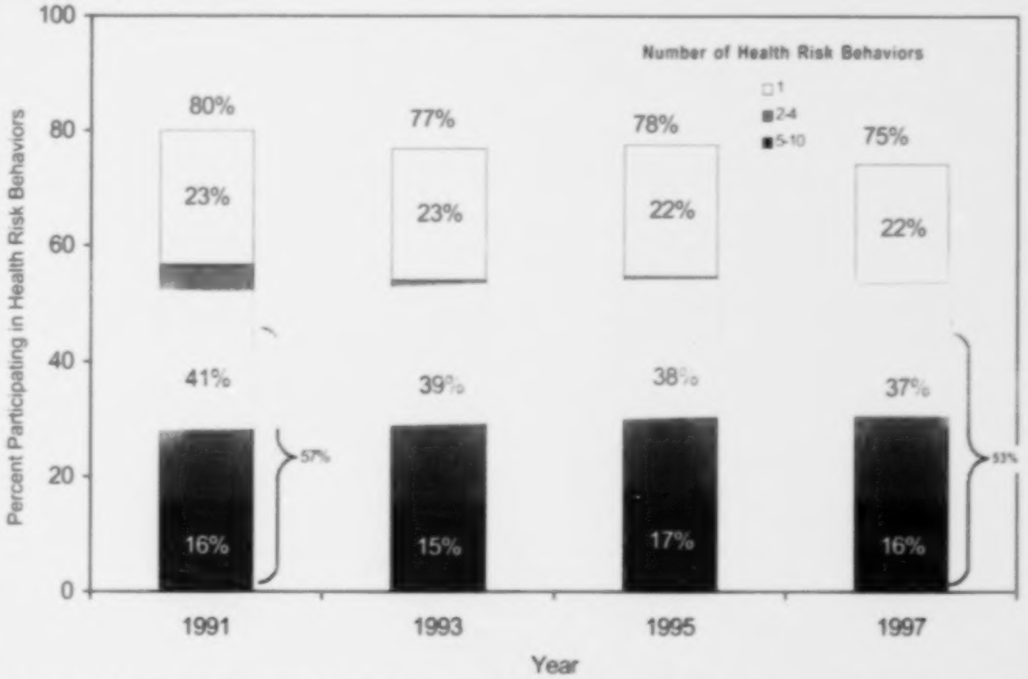
While the prevalence of some health-risk behaviors increased and others declined, high school students reported an overall shift toward less risk-taking between 1991 and 1997 (figure 2). This general downward shift can be explained by two more specific declines. First, the share of students participating in *any* health-risk behavior declined gradually during this period, from 80 percent in 1991 to 75 percent in 1997 — a change equivalent to a 29 percent increase in the proportion of students not involved in any health-risk behavior. By 1997, one-fourth of 9th- to 12th-grade students did not participate in any of the risk behaviors examined here.

Second, a decline in the share of students engaged in *multiple* (two or more) health-risk behaviors also contributes to the shift toward less risk-taking. Between 1991 and 1997, the share of students engaging in two or more risk behaviors fell from 57 percent to 53 percent. When students participating in 2 to 4 risk behaviors and students participating in 5 to 10 risk behaviors were examined separately, we found that declines in multiple risk-taking occurred almost exclusively in the share of students engaging in 2 to 4 health-risk behaviors (41 percent in 1991 versus 37 percent in 1997).

Reductions in overall risk-taking did not extend to the highest-risk students. The share of highest-risk students—those involved in five or more risk behaviors—did not change from 1991 to 1997. Throughout this period, about 16 percent of all students participated in five or more health-risk behaviors. Within this group, the average number of health-risk behaviors remained fairly stable (6.0 in 1991 versus 6.1 in 1997, data not shown).

Figure 2

Distribution of Number of Health Risk Behaviors Engaged in by High School Students, by Year



*Health risk behaviors include regular alcohol use, regular binge drinking, regular tobacco use, marijuana use, cocaine use, sexual intercourse, physical fighting, weapon carrying, suicidal thoughts, and suicide attempt.

Source: Authors' tabulations from 1991, 1993, 1995, and 1997 Youth Risk Behavior Surveys.

Hispanic students were an exception.

Most groups of students reported similar changes in overall risk-taking from 1991 to 1997. They had declines in the share of students engaging in any risk-taking, declines in multiple risk-taking, and no change in the share of highest-risk students (table 3). These changes were similar by gender and grade, maintaining the greater overall risk-taking of male students as compared to female and the greater overall risk-taking of 11th- and 12th-grade students as compared to 9th- and 10th-grade students. However, these general changes did not extend to all races. While white and black students reported similar declines, Hispanic students did not. Hispanic students exhibited a smaller increase in the share engaging in no risk behaviors. Most importantly, the share of Hispanic students engaging in five or more risk behaviors increased from 13 percent in 1991 to 19 percent in 1997.

Table 3

Distribution of Number of Health Risk Behaviors among High School Students by Grade, Gender, Race/Ethnicity, and Year

	Number of Risk Behaviors *				
	0	1	2-4	5-10	Total
Total (%)					
1991	20.1	23.2	41.1	15.6	100
1997	25.9	22.0	36.5	15.6	100
Grade (%)					
Grades 9-10					
1991	24.2	23.2	39.4	13.2	100
1997	29.0	22.5	33.6	14.9	100
Grades 11-12					
1991	16.1	23.1	42.8	18.0	100
1997	23.1	21.5	39.2	16.3	100
Gender (%)					
Female					
1991	23.0	26.5	38.7	11.9	100
1997	30.4	23.6	34.0	12.1	100
Male					
1991	17.4	20.0	43.5	19.2	100
1997	22.2	20.7	38.6	18.5	100
Race/Ethnicity (%)					
Hispanic					
1991	21.1	23.0	42.6	13.4	100
1997	24.2	20.6	36.0	19.3	100
Non-Hispanic White					
1991	21.5	22.3	38.9	17.3	100
1997	27.4	22.1	35.0	15.6	100
Non-Hispanic Black					
1991	10.2	27.4	51.8	10.7	100
1997	17.2	26.1	45.7	11.0	100

*Health risk behaviors include regular alcohol use, regular binge drinking, regular tobacco use, marijuana use, cocaine use, sexual intercourse, physical fighting, weapon carrying, suicidal thoughts, and suicide attempt.

Source: Authors' tabulations from 1991and 1997 Youth Risk Behavior Surveys.

Table 4 further examines this increase in the share of highest-risk students among Hispanics. It shows that the increase was concentrated among students in grades 9 and 10, whose participation in five or more risk behaviors nearly doubled from 11 percent in 1991 to 20 percent in 1997. In contrast, the share of Hispanic students in grades 11 and 12 participating in five or more risk behaviors increased only three percentage points, from 16 to 19 percent. Among non-Hispanic white and non-Hispanic black students, participation in five or more risk behaviors remained relatively stable from 1991 to 1997 for all grades. The exception to the stable rates in this category among blacks and whites was non-Hispanic white students in grades 11 and 12, who reported a small decline in this highest-level risk-taking, from 20 percent in 1991 to 17 percent in 1997.

Table 4

Distribution of Number of Health Risk Behaviors among High School Students by Race/Ethnicity, Grade, and Year

	Number of Risk Behaviors*				
	0	1	2-4	5-10	Total
Total					
Grades 9-10					
1991	24.2	23.2	39.4	13.2	100
1997	29.0	22.5	33.6	14.9	100
Grades 11-12					
1991	16.1	23.1	42.8	18.0	100
1997	23.1	21.5	39.2	16.3	100
Hispanic					
Grades 9-10					
1991	23.9	21.0	44.2	10.9	100
1997	26.8	20.2	33.5	19.5	100
Grades 11-12					
1991	18.3	24.9	40.8	15.9	100
1997	21.5	21.0	38.6	19.0	100
Non-Hispanic White					
Grades 9-10					
1991	26.6	23.1	36.1	14.2	100
1997	32.0	22.2	31.7	14.1	100
Grades 11-12					
1991	16.4	21.4	41.8	20.4	100
1997	23.4	22.0	37.8	16.8	100
Non-Hispanic Black					
Grades 9-10					
1991	10.6	25.0	54.2	10.2	100
1997	18.8	25.9	43.8	11.5	100
Grades 11-12					
1991	9.7	29.9	49.3	11.0	100
1997	15.7	25.7	47.9	10.6	100

*Health risk behaviors include regular alcohol use, regular binge drinking, regular tobacco use, marijuana use, cocaine use, sexual intercourse, physical fighting, weapon carrying, suicidal thoughts, and suicide attempt.

Source: Authors' tabulations from 1991and 1997 Youth Risk Behavior Surveys.

The YRBS surveys did not collect further information that would permit more detailed analysis of risk-taking among Hispanic students. In particular, we cannot distinguish by different ethnic and cultural subgroups among Hispanics, although other research finds cross-sectional differences in health-risk behaviors among Hispanic students by immigrant status and country of origin.[15]

Conclusions

The 1990s have seen substantial changes in students' participation in many health-risk behaviors, including declines in physical fighting, weapon-carrying, sexual intercourse, and suicidal thoughts. The prevalence of different types of substance use increased or remained stable.

While the prevalence of some health-risk behaviors increased and others declined, there have been declines in overall risk-taking among high school students. There has been a sizable *increase* in the share of students who engage in none of the 10 risk behaviors examined here and a sizable *decrease* in the proportion of students who engage in multiple risk behaviors.

The share of highest-risk students—those engaging in five or more health-risk behaviors—remained stable from 1991 to 1997.

Hispanic students did not report the same shift toward less risk-taking as other students. The share of Hispanic students engaging in five or more risk behaviors grew, primarily among those students in grades 9 and 10.

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[15] Brindis, C., Wolfe, A.L., McCarter, V., Ball, S., and Starbuck-Morales, S. 1995. "The Associations Between Immigrant Status and Risk-behavior Patterns in Latino Adolescents." *Journal of Adolescent Health*, 17:99-105; Harris, K.M. 1998. "The Health Status and Risk Behavior of Adolescents in Immigrant Families." In *Children of Immigrants: Health, Adjustment, and Public Assistance*, edited by D.J. Hernandez. Committee on the Health and Adjustment of Immigrant Children and Families, Board on Children, Youth, and Families. Washington, D.C.: National Academy Press.

Multiple Threats: PART 3

The Co-Occurrence of Teen Health Risk Behaviors

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The Urban Institute

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Additional data comes from the Add Health project, a program designed by J. Richard Udry (PI) and Peter Bearman, and funded by grant P01-HD31921 from the National Institute of Child Health and Human Development to the Carolina Population Center, University of North Carolina at Chapel Hill, with cooperative funding participation by the National Cancer Institute; the National Institute of Alcohol Abuse and Alcoholism; the National Institute on Deafness and Other Communication Disorders; the National Institute on Drug Abuse; the National Institute of General Medical Sciences; the National Institute of Mental Health; the National Institute of Nursing Research; the Office of AIDS Research, NIH; the Office of Behavior and Social Science Research, NIH; the Office of the Director, NIH; the Office of Research on Women's Health, NIH; the Office of Population Affairs, DHHS; the National Center for Health Statistics, Centers for Disease Control and Prevention, DHHS; the Office of Minority Health, DHHS; the Office of the Assistant Secretary for Planning and Evaluation, DHHS; and the National Science Foundation. Persons interested in obtaining data files from The National Longitudinal Study of Adolescent Health should contact Jo Jones, Carolina Population Center, 123 West Franklin Street, Chapel Hill, NC, 27516-3997 (email: jo_jones@unc.edu).

Multiple Threats: The Co-Occurrence of Teen Health Risk Behaviors

Many teenagers participate in risk behaviors that threaten their current and future health. Substance use, violence, and unprotected sexual intercourse are responsible for much of the mortality and morbidity experienced in adolescence and early adulthood.[1] While older adults are vulnerable to illnesses such as heart disease, cancer, and diabetes, adolescents are threatened by homicide, suicide, car accidents, and AIDS — ailments that are behavioral and, therefore, preventable.[2]

There is growing recognition that teens who engage in risk behaviors often participate in multiple types of behaviors, referred to as clustering or co-occurrence.[3] Evidence suggests that adolescent risk behaviors share common underlying causes as well as having unique influences; individual, biological, family, school, and neighborhood factors all influence the types of risks teens take.[4] In addition to monitoring adolescent participation in specific behaviors, it is important to focus on the co-occurrence of risk-taking among teens.

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[1] Sells, C.W. and Blum, R.W. 1996. "Morbidity and Mortality Among U.S. Adolescents: An Overview of Data and Trends." *American Journal of Public Health* 86: 513—519.

[2] U.S. Preventive Services Task Force. 1996. *Guide to Clinical Preventive Services* (2nd ed.). Alexandria, VA: International Medical Publishing; Ozer, E.M., Brindis, C.D., Millstein, S.G., Knopf, D.K., and Irwin, C.E. 1998. *America's Adolescents: Are They Healthy?* San Francisco, CA: National Adolescent Health Information Center, University of California, San Francisco.

In this chapter, we present a portrait of multiple risk-taking among teens. Using recent data from the National Longitudinal Study of Adolescent Health (Add Health) and the 1995 National Survey of Adolescent Males (NSAM) [box 1], we describe the degree to which teens engage in multiple health risk behaviors and contrast it with the extent to which teens participate in positive behaviors such as spending time with parents and being involved in extra-curricular activities. Describing participation in these behaviors is an important part of understanding teens' exposure to health risks and monitoring efforts to reduce those risks.

BOX 1

The National Longitudinal Study of Adolescent Health (Add Health) is a study of the health-related behaviors of students in the United States. Interviews were conducted in two stages. In the first stage, students in grades 7 through 12 attending 145 schools around the U.S. answered brief questionnaires in their classrooms. In the second stage, in-home interviews were conducted with a subset of students between April and December of 1995. Data for this study come from the 12,105 students participating in both stages of the survey who are representative of adolescents in grades 7 through 12 during the 1994-95 school year. More information about Add Health and access to data is available at www.cpc.unc.edu/addhealth.

The 1995 National Survey of Adolescent Males (NSAM) is a household survey of a nationally representative sample of 1,729 15- through 19-year-old males. Since the NSAM is representative of teenage males living in households, the sample includes both current students and non-students. More information about NSAM and access to data is available at www.socio.com.

Use of a new computer-assisted interviewing technology greatly enhances the quality of the self-reported data examined here. Prior studies of health risk behaviors among adolescents have been hampered by concerns about the honesty of self-reports for behaviors that are highly sensitive and may be illegal. Both NSAM and Add Health used innovative technology to address this concern. Instead of using standard paper and pencil self-administered questionnaires, adolescents answered sensitive questions directly on lap-top computers. Researchers using NSAM found that teen males were significantly more likely to report participation in many health risk behaviors using the computer rather than the paper self-administered questionnaires. For example, teen males were two times as likely to report daily marijuana use in the past year on the computer questionnaire, as compared to the paper and pencil version.[1]

[1] Turner, C.F., Ku, L., Rogers, S.M., Lindberg, L.D., Pleck, J.H., and Sonenstein, F.L. 1998. "Adolescent Sexual Behavior, Drug Use, and Violence: New Survey Technology Detects Elevated Prevalence." *Science* 280(5365): 867—873.

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[1] There is also concern about adolescents' participation in more than one risk behavior at a single point in time, such as drinking immediately prior to sexual intercourse. (See, for example, Halpern-Felsher, B.L., Millstein, S.G., and Ellen, J.M. 1996. "Relationship of Alcohol Use and Risky Sexual Behavior: A Review and Analysis of Findings." *Society for Adolescent Medicine* 19: 331—336.)

[2] Donovan, J.E., and Jessor, R. 1985. "Structure of Problem Behavior in Adolescence and Young Adulthood." *Journal of Counseling and Clinical Psychology* 53: 890—904; Irwin, C.E., Jr., and Millstein, S.G. 1986. "Biophysical Correlates of Risk-Taking Behaviors During Adolescence." *Journal of Adolescent Health Care* 7: 82S—96S; Kandel, D. 1988. "Issues of Sequencing of Adolescent Drug Use and Other Problem Behaviors." *Drugs and Society* 3: 55—76; Elliot, D.S., and Morse, B.J. 1989. "Delinquency and Drug Use as Risk Factors in Teenage Sexual Activity." *Youth and Society* 21: 21—60.

How Are Health Risk Behaviors Measured?

Health risk behaviors may threaten the well-being of teens and may prevent them from becoming fully functioning members of society.

Using recent data from students in grades 7 through 12 from the Add Health survey, we explore the extent to which middle and high school students engage regularly in multiple health risk behaviors. Drawing from common approaches used in prior research, we define health risk behaviors as volitional involvement in established patterns of behavior that threaten the well-being of teens and limit their potential for achieving responsible adulthood.[5] (These are also commonly referred to as problem behaviors.[6]) We distinguish risk-taking behaviors from risk outcomes—the consequences of the behavior. For example, unprotected sexual intercourse is a risk behavior and is included in this analysis, while teenage pregnancy is a risk outcome and is not examined here.

Table 1 identifies the 10 health risk behaviors examined in this study: regular tobacco use, regular alcohol use, regular binge drinking, recent marijuana use, recent use of illicit drugs other than marijuana, physical fighting, carrying a weapon at school, suicidal thoughts, non-fatal suicide attempt,[7] and unprotected sexual intercourse. Although these 10 behaviors are not an exhaustive list of adolescent health risk, they reflect key areas of risk-taking. Conclusions from this study do not necessarily extend to other types of health risk behaviors. Other studies have explored additional types of risk taking such as dangerous driving, eating disorders, and criminal activity.[8]

The definitions employed here are designed to be comparable to measures of similar behaviors in other surveys and to reflect a wide range of behaviors that concern researchers and policymakers. The measurement of these behaviors addresses regular or established patterns of risk-taking, not just exploratory behavior, by incorporating indicators of recency and frequency. For example, "regular tobacco use" refers to the daily use of cigarettes or chewing tobacco during the last 30 days — not infrequent experimentation with smoking products.[9] While there is no clear rule for establishing the minimum recency or frequency for classifying a behavior as regular or patterned[10], an effort was made to establish similar frequencies of participation across behaviors to the extent possible with the available data.

Although all of the behaviors examined occurred in the year prior to the interview, they are not measured with reference to the same time period due to limitations in the data collection (table 1). Because of the data's various time references and the fact that they are cross-sectional, we cannot assume causal links between the behaviors — co-occurrence is not proof that one behavior causes the other. However, the data allow us to describe the frequency and patterns of multiple risk-taking.

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[5] Resnick, G., and Burt, M.R. 1996. "Youth at Risk: Definitions and Implications for Service Delivery." *American Journal of Orthopsychiatry* 66(2): 172—188; Elliott, D.S. 1993. "Health-Enhancing and Health-Compromising Lifestyles." In *Promoting the Health of Adolescents.* Millstein, S.G., Petersen, A.C., and Nightingale, E.O., eds. New York, NY: Oxford University Press.

[6] Jessor, R., and Jessor, S. 1977. Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth. New York: Academic Press.

[7] A non-fatal suicide attempt is defined as a health risk behavior, not a risk outcome, because it is a strong predictor of a later completed suicide and this is a substantial threat to adolescent health. See Spirito, A., Brown, J., Overholser, J., and Fritz, G. 1989. "Attempted Suicide in Adolescence: A Review and Critique of the Literature" *Clinical Psychology Review* 9: 335—363.

[8] Kolbe, L.J., Kann, L., and Collins, J.L. 1993. "Overview of the Youth Risk Behavior Surveillance System." *Public Health Report* 108 (supp. 1): 2-10; Ponton, L.E. 1996. "Disordered Eating." In *Handbook of Adolescent Health Risk Behavior.* New York and London: Plenum Press; Osgood, D.W., O'Malley, P.M., Bachman, J.G., and Johnston, L.D. 1988. "The Generality of Deviance in Late Adolescence and Early Adulthood." *American Sociological Review* 53: 81—93.

[9] This is similar to the measure of cigarette smoking employed in the national indicators of child well-being. U.S. Department of Health and Human Services (DHHS). Office of the Assistant Secretary for Planning and Evaluation. 1998. *Trends in the Well-Being of America's Children and Youth.* Washington, DC: DHHS.

[10] Elliott, D.S. 1993. "Health-Enhancing and Health-Compromising Lifestyles." In *Promoting the Health of Adolescents.*

Table 1

Definitions of Health Risk Behaviors as Measured in Add Health

Health Risk Behavior	Definition	Time period: Last 30 days	Time period: Last 12 months
Regular Tobacco Use	Used chewing tobacco every day or smoked cigarettes every day in the last 30 days.	T	
Regular Alcohol Use	Drank 1+ times per week in the last 12 months.		T
Regular Binge Drinking	Drank 5+ drinks in a row, 1+ times per week in the last 12 months.		T
Marijuana Use	Smoked marijuana 1+ times in the last 30 days.	T	
Other Illicit Drug Use	Used cocaine, inhalants, or other illicit drugs 1+ times in the last 30 days.	T	
Fighting	Involved in a physical fight in the last 12 months.		T
Weapon Carrying	Carried a weapon, such as a gun, knife, or club, to school in the last 30 days.	T	
Suicidal Thoughts	Thought seriously about suicide in the last 12 months.		T
Suicide Attempt	Attempted suicide in the last 12 months.		T
Unprotected Intercourse	Did not use an effective contraceptive method at most recent intercourse. Respondents who had never had sex or hadn't had sex in the last 12 months were considered not to have engaged in unprotected intercourse in the last 12 months.		T

Table 2 presents the prevalence of each health risk behavior by grade, gender, and race/ethnicity.[11] The prevalence of these 10 behaviors varies widely, although across all groups fighting is the most common and illicit drug use other than marijuana is the least common. Most of the specific behaviors increase by grade-level; physical fighting is the only behavior to decline substantially at the older grades. Males students are generally more likely than female students to engage in each type of health risk behavior, except for the suicidal behaviors which are substantially higher among females. Patterns by race/ethnicity are less predictable, with the largest differences occurring in regular tobacco use and physical fighting.

Table 2

Prevalence of Health Risk Behaviors among Students in 7th-12th Grade, by Grade, Gender, and Race/Ethnicity

	Regular Tobacco Use	Regular Alcohol Use	Regular Binge Drinking	Marijuana Use	Other Illicit Drugs	Fighting	Weapon Carrying	Suicidal Thoughts	Suicide Attempt	Unprotected Intercourse
All (%) *	11	11	7	14	5	33	6	13	4	12
Grade (%)										
7-8 grade	5	4	3	8	4	37	5	11	4	6
9-10 grade	11	10	7	16	6	33	7	15	4	14
11-12 grade	18	17	12	19	6	27	6	13	3	20
Gender (%)										
Male	12	13	10	16	6	42	9	10	2	11
Female	10	8	5	13	5	23	3	16	6	14
Race/Ethnicity (%)										
Non-Hispanic white	15	11	8	14	7	29	5	13	4	11
Non-Hispanic black	2	10	6	14	2	44	6	11	4	17
Hispanic	6	9	7	14	4	39	8	13	4	14

*"All" includes Asian, Native American, and other racial/ethnic groups.

Source: Authors' tabulations from 1995 Add Health.

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[11] The totals include respondents of all racial/ethnic groups, while the race/ethnicity breakdown is limited to non-Hispanic whites, non-Hispanic blacks, and Hispanics.

How Common Are Multiple Risk Behaviors?

Engaging in multiple risk behaviors is the exception rather than the rule.

Table 3 shows that 46 percent of students in grades 7 through 12 do not participate in any of the identified risk behaviors. Twenty-six percent report engaging in only one health risk behavior. A similar share, 24 percent, participate in two to four risk behaviors. Participation in five or more health risk behaviors, reported by 4 percent of students, is uncommon. In total, 28 percent of students participate in multiple behaviors, that is two or more of the ten behaviors under study. Thus, for 7th through 12th grade students, the co-occurrence of risk behaviors is the exception, not the rule.

Table 3

Number of Health Risk Behaviors among Students in 7th-12th Grade, by Grade, Gender, and Race/Ethnicity

	Number of Risk Behaviors*					
	0	1	2-4	5+	Total**	2+
All (%) ***	46	26	24	4	100	28
Grade (%)						
7-8 grade	53	28	17	2	100	19
9-10 grade	44	25	25	5	100	30
11-12 grade	40	23	30	6	100	36
Gender (%)						
Male	39	29	26	5	99	31
Female	52	22	22	4	100	26
Race/Ethnicity (%)						
Non-Hispanic white	47	24	23	5	99	28
Non-Hispanic black	39	32	26	3	100	29
Hispanic	45	27	24	4	100	28

* Risk Behaviors include regular tobacco use, regular alcohol use, regular binge drinking, marijuana use, other illicit drug use, fighting, weapon carrying, suicidal thoughts, suicide attempt, and unprotected intercourse.

** Totals may not sum to 100% due to rounding.

*** "All" includes Asian, Native American, and other racial/ethnic groups.

Source: Authors' tabulations from 1995 Add Health.

The share of students engaging in multiple risk behaviors is similar by race/ethnicity.

The likelihood of engaging in multiple health risk behaviors does not vary significantly by race/ethnicity (table 3). However, black students were less likely than white or Hispanic students to engage in no risk behavior and more likely to engage in only one risk behavior. Black students' elevated rate of participation in one risk behavior derives primarily from their higher rate of physical fighting, as compared with white and Hispanic students.

Older students are more likely to engage in multiple risk behaviors.

The share of students engaging in multiple risk behaviors increases by grade level. Among students in grades 7 and 8, 19 percent engage in two or more risk behaviors. This proportion rises to 30 percent among 9th and 10th graders and 36 percent among 11th and 12th graders. The small group of teens who engage in five or more behaviors triples from 7th and 8th graders to 11th and 12th graders. While differences by grade may represent fixed developmental patterns of behavior, they may also reflect changes in the onset of specific health risk behaviors over time.

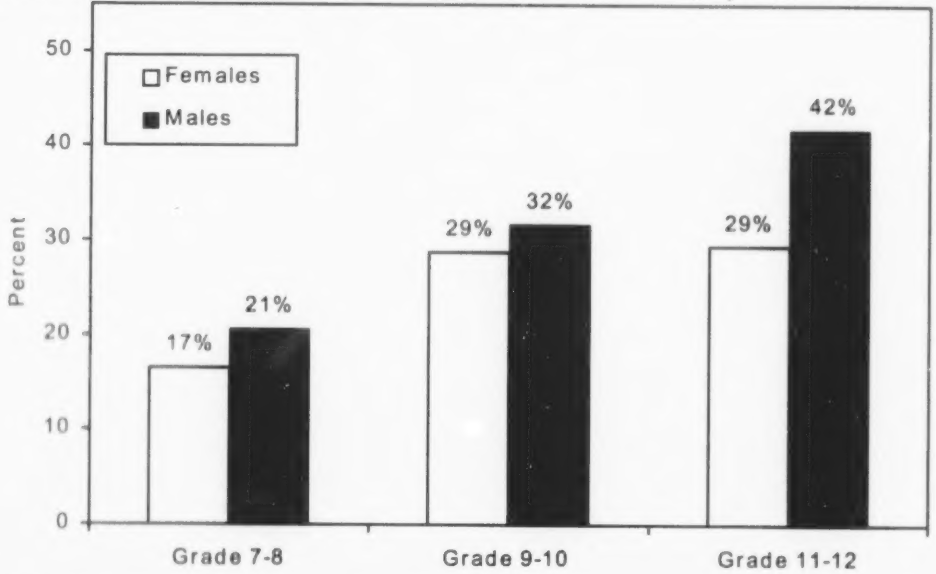
Boys are more likely than girls to engage in multiple risk behaviors.

Boys are less likely than girls to report no risk behavior and are more likely to engage in multiple risk behaviors. Thirty-one percent of male students in grades 7 through 12 engage in two or more risk behaviors, compared to 26 percent of female students.

Boys and girls have different patterns of risk-taking by grade (figure 1), suggesting that boys and girls have different developmental trajectories. Among girls, the rate of multiple risk-taking rises by 75 percent from grades 7 and 8 (17 percent) to grades 9 and 10 (29 percent), and then levels off among 11th and 12th graders (29 percent). For boys, the increase in multiple risk-taking in older grades is fairly linear, with boys in grades 11 and 12 twice as likely as boys in grades 7 and 8 to engage in two or more risk behaviors (42 percent compared to 21 percent). As a result of the different patterns by gender, the difference between boys and girls in multiple risk-taking grows larger at higher grades.

Figure 1

Percent of Teens Engaging in Multiple Risk Behaviors*, by Grade and Gender



* Risk Behaviors include regular tobacco use, regular alcohol use, regular binge drinking, marijuana use, other illicit drug use, fighting, weapon carrying, suicidal thoughts, suicide attempt, and unprotected intercourse.
Source: Authors' tabulations from 1995 Add Health.

The minority of students take the majority of risks.

When students engage in health risk behaviors, they are often involved in multiple risk behaviors. Of the 54 percent of students engaging in at least one risk behavior, just over half also engage in a second (table 4). For all but one of the risk behaviors, at least 75 percent of students engaging in it are also engaging in another. For example, among students reporting regular tobacco use, 85 percent engage in at least one additional risk behavior. Among students who carried weapons at school, 89 percent are also involved in at least one additional risk behavior.

Table 4

Students in 7th-12th Grade Reporting One or More Health Risk Behavior

	Health Risk Behavior	
	Students reporting behavior (%)	Students Reporting at least one additional behavior (%)
Any Risk Behavior	54	53
Regular Tobacco Use	11	85
Regular Alcohol Use	11	92
Regular Binge Drinking	7	97
Marijuana Use	14	88
Other Illicit Drugs	5	95
Fighting	33	56
Weapon Carrying	6	89
Suicidal Thoughts	4	75
Suicide Attempt	13	100
Unprotected Intercourse	12	76

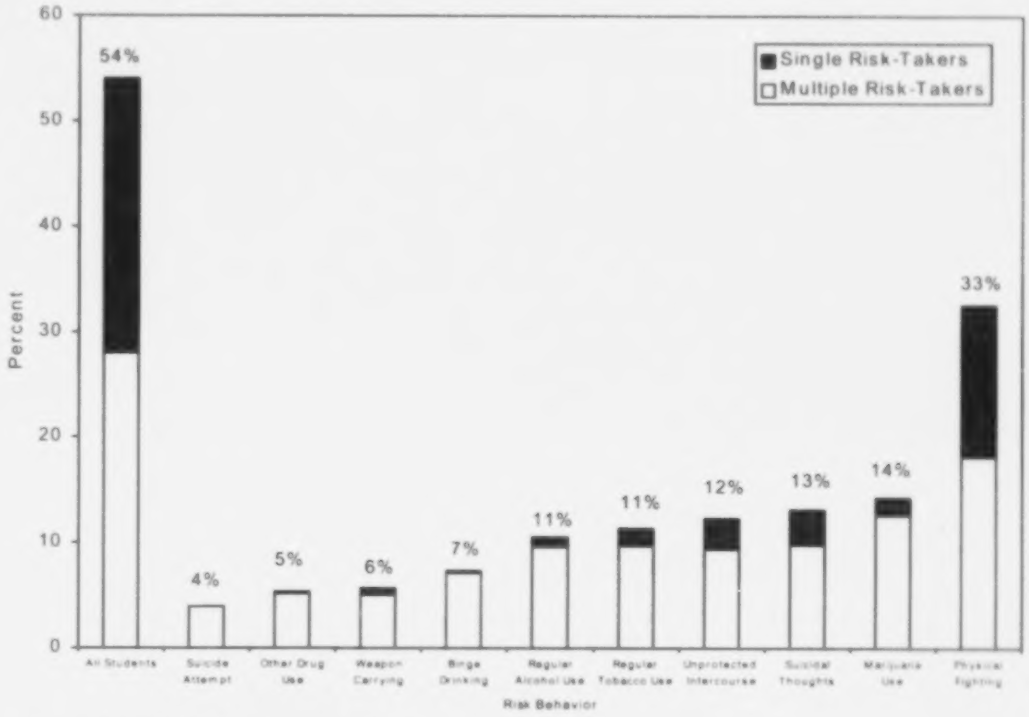
Source: Authors' tabulations from 1995 Add Health.

Figure 2 illustrates the point that while multiple-risk students are a minority of all students, they are the majority of students involved in each specific risk. Among all students, only 28 percent are multiple risk takers. A multiple-risk student is counted in the overall prevalence for each risk behavior that he or she is involved in. Thus, the total share of multiple-risk students (28 percent) can not be summed across the 10 risk behaviors. For example, a student who is a regular smoker and engages in unprotected intercourse is a multiple risk-taker; as such, he or she is counted in both the 11 percent tobacco prevalence and the 12 percent unprotected intercourse prevalence. In contrast, the single risk-takers in each specific behavior can be summed across all 10 behaviors totaling the 26 percent of all students involved in only one health risk behavior. These single risk-takers generally make up only a small share of students involved in the specific risk behaviors.

However, students involved in only one health risk behavior do make up the majority of all fighters. This is the only behavior for which this is true. Fifty-six percent of fighters engage in no other health risk behavior. Furthermore, many of these students are only involved in a single fight during the past year. Only 13 percent of students are involved in two or more fights in the past year. Among this group of multiple fighters, 64 percent engaged in another health risk behavior as well (results not shown).

Figure 2

Prevalence of Single and Multiple Risk-Taking among Students in 7th-12th Grade, by Type of Behavior



Source: Authors' tabulations from 1995 Add Health.

Which Health Risk Behaviors Co-occur?

The co-occurrence of health risk behaviors is rarely so strong that two specific behaviors always occur together.[12] Instead, table 5 shows that when specific pairs of risk behaviors are examined, generally only a minority of students engaging in one behavior also engage in the other. Rates of overlap tend to be highest among substance use behaviors. For example, 45 percent of regular tobacco users also use marijuana, while 35 percent of marijuana users are also regular tobacco users. Students engage in a wide range of combinations of the 10 risk behaviors.

Table 5

Conditional Prevalence of Health Risk Behaviors among Students in 7th-12th Grade, by Participation in Specific Health Risk Behaviors

	Conditional Prevalence									
Students Engaged in:	Regular Tobacco Use (%)	Regular Alcohol Use (%)	Regular Binge Drinking (%)	Marijuana Use (%)	Other Illicit Drugs (%)	Fighting (%)	Weapon Carrying (%)	Suicidal Thoughts (%)	Suicide Attempt (%)	Unprotected Intercourse (%)
Regular Tobacco Use	—	30	26	45	20	49	11	22	8	27
Regular Alcohol Use	32	—	58	49	21	50	16	23	9	27
Regular Binge Drinking	40	83	—	53	25	52	18	23	8	30
Marijuana Use	35	34	26	—	29	50	14	25	10	26
Other Illicit Drug Use	41	41	33	76	—	52	20	37	17	27
Fighting	17	16	12	22	9	—	13	18	6	17
Weapon Carrying	21	28	23	36	19	71	—	30	13	22
Suicidal Thoughts	19	18	13	27	16	44	13	—	30	20
Suicide Attempt	24	25	16	37	25	52	19	100	—	25
Unprotected Intercourse	25	24	18	31	12	46	10	21	8	—
All	11	11	7	14	5	33	6	4	13	12

Source: Authors' tabulations from 1995 Add Health.

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[12] The only exception to this is suicide attempts and suicidal thoughts. Because only students who report suicidal thoughts were asked about suicide attempt, 100 percent of students who reported a suicide attempt also reported suicidal thoughts. In contrast, only 30 percent of students who reported suicidal thoughts reported a suicide attempt.

How Common are Positive Behaviors?

Today's teens are not just involved in negative health behaviors, they are actively participating in positive behaviors as well. Our definition of positive behaviors focuses on those behaviors that may promote the well-being of teens.[13] They include getting good grades in school, participating in school sports, participating in other school activities, being involved with a religious institution, and spending time with parents.[14] Identifying patterns of co-occurrence of positive behaviors with risk behaviors helps to challenge the categorization of teenagers as either "good kids" or "bad kids."

The majority of students engage in positive behaviors.

While few students engage in all of the positive behaviors examined, 92 percent of students engage in at least one. Table 6 shows that the majority of students report receiving good grades (54 percent), participating on a school sports team (58 percent), participating in other school activities (53 percent), being involved with a religious institution (72 percent), or spending time with parents (76 percent).

There are differences by age, grade, and race/ethnicity in the extent of participation in positive behaviors. Participation in positive behaviors declines with grade level, falling from an average of 2.6 behaviors among 7th and 8th grade students to 2.3 behaviors among 11th and 12th grade students. Boys engage in fewer positive behaviors on average than girls (2.3 positive behaviors versus 2.6 positive behaviors). Hispanic students engage in fewer positive behaviors (2.1) than white or black students (2.5 and 2.4 respectively). These general patterns of differences extend to each type of positive behavior; the only exception is the greater participation in school sports among male than female students.

Table 6

Prevalence of Positive Behaviors among Students in 7th-12th Grade, by Grade, Gender, and Race/Ethnicity

	Positive Behavior						
	Any Positive Behavior	Good Grades	School Sports	Other School Activities	Religious Involvement	Family Involvement	Avg # of Positive Behaviors
All (%) *	92	54	58	53	72	76	2.4
Grade (%)							
7-8 grade	94	55	61	53	75	77	2.6
9-10 grade	93	51	61	51	73	76	2.5
11-12 grade	92	54	51	57	68	75	2.3
Gender (%)							
Male	91	50	62	42	70	73	2.3
Female	94	57	54	65	74	78	2.6
Race/Ethnicity (%)							
Non-Hispanic white	93	58	60	56	70	78	2.5
Non-Hispanic black	92	39	58	51	79	72	2.4
Hispanic	89	41	49	42	74	69	2.1

* "All" includes Asian, Native American, and other racial/ethnic groups.

Source: Authors' tabulations from 1995 Add Health.

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[13] This approach differs from recent research examining "health-enhancing" behaviors directly, such as regular exercise, seat belt use, and adequate sleep (See, for example, Jessor, R., Turbin, M.S., and Costa, F.M. 1998 "Protective Factors in Adolescent Health Behavior." *Journal of Personal Social Psychology* 75(3): 788—800). Our interest is in examining adolescents' behavior outside of the limited realm of risky or enhancing health behaviors and to look more broadly at other socially desirable behaviors.

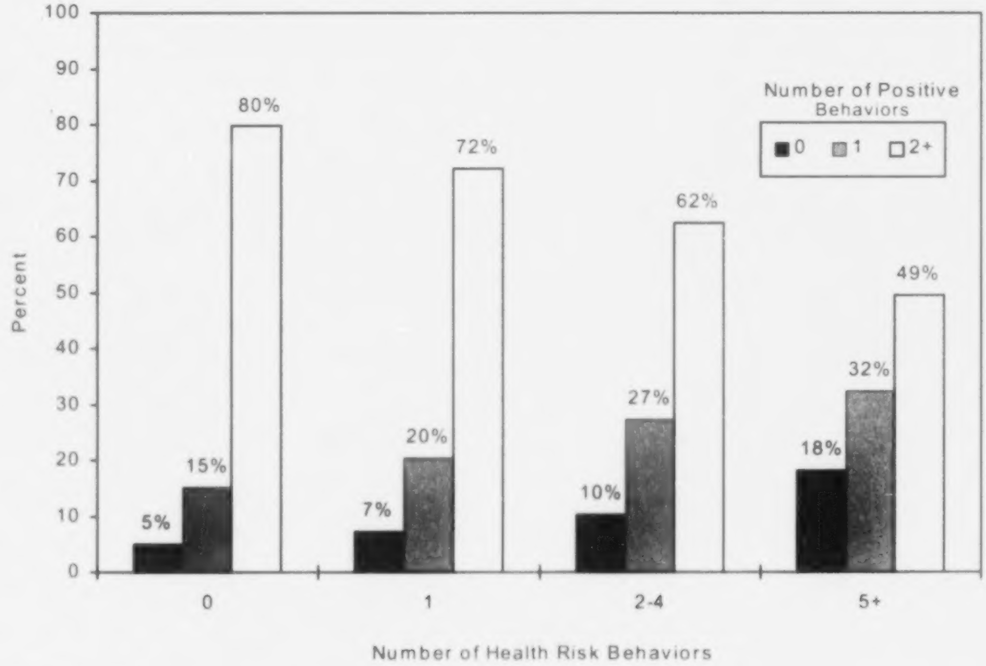
[14] Positive behaviors in Add Health include: *Good Grades*, indicated by a B average or higher for most recent grading period; *School Sports*, indicated by participating in or planning to participate in a school sport this year; *Other School Activities*, indicated by participating in or planning to participate in a non-sport school extracurricular this year; ***Religious Involvement***, indicated by attending church services or church youth group once or more per month last year; and ***Family Involvement***, indicated by four or more of the following positive interactions with parents (resident and non-resident) in the last 4 weeks: shopping; playing a sport; going to a religious service or church-related event; talking about someone you're dating or a party you went to; going to a movie, play, museum, concert, or sports event; talking about a personal problem you were having; talking about your school work or grades; working on a project for school; talking about other things you're doing in school.

Participation in multiple risk behaviors does not preclude participation in positive behaviors.

Students who engage in multiple health risk behaviors also engage in many positive behaviors, as shown in figure 3. Even among students engaging in five or more risk behaviors, 81 percent engage in at least one positive behavior. However, the more risk behaviors students engage in, the fewer positive behaviors they report. For example, participation in two or more positive behaviors is reported by 49 percent of students engaging in five or more health risk behaviors, compared to 80 percent of those students engaging in no health risk behaviors. This general pattern is consistent among both sexes and all grades and racial/ethnic groups (results not shown).

Figure 3

Participation in Positive Behaviors among Students in 7th-12th Grade, by Number of Health Risk Behaviors



Note: Totals may not sum to 100% due to rounding.

Source: Authors' tabulations from 1995 Add Health.

Out-of-School Males: A Vulnerable Group

Add Health only includes students and cannot be used to generalize to all adolescents, including those currently out of school. The survey likely underestimates the prevalence of risk behaviors among all teenagers since those who drop out of school are at higher risk of engaging in health risk behaviors.[15] Estimates of risk behaviors among older adolescents will be particularly affected, since they are more likely to drop out or to have completed school.

To illustrate this point, we examine risk-taking among adolescent males ages 15 through 19 both in school and out of school in the 1995 NSAM. The out-of-school populations include both high school drop outs and those who have completed high school but are not currently enrolled in post-secondary education. NSAM inquires about most of the same health risk behaviors as Add Health but does not measure suicidal behavior.[16]

Out-of-school males are more likely than in-school males to engage in multiple risk behaviors.

Table 7 shows that compared to in-school males, out-of-school males are more likely to engage in multiple risk behaviors. Sixty-four percent of out-of-school males engage in two or more health risk behaviors, compared to only 40 percent of in-school males. Although out-of-school males are older on average than in-school males, these age differences alone do not account for the greater participation in multiple risk behaviors among the former group.

Almost all adolescent males, regardless of school status, engage in at least one positive behavior (95 percent).[17] Only 4 percent of out-of-school males and 8 percent of in-school males report engaging in none of the positive behaviors examined. Nearly all are either employed, receive good grades, participate in sports or clubs, or report religious involvement. Even among out-of-school males who engage in multiple risk behaviors, more than 90 percent engage in some positive behavior.

Out-of-school males are less likely than in-school males to engage in multiple positive behaviors. Only 54 percent of all out-of-school males engage in two or more positive behaviors, compared to 74 percent of in-school males.

[15] Brener, N.D., and Collins, J.L. 1998. "Co-occurrence of Health-Risk Behaviors Among Adolescents in the United States." *Journal of Adolescent Health* 22(3): 209—213; Center for Disease Control. 1994. "Health Risk Behaviors Among Adolescents Who Do and Who Do Not Attend School—United States, 1992." *Morbidity and Mortality Weekly Report* 43: 129-132.

[16] Health risk behaviors are measured slightly differently in the Add Health and NSAM surveys. "Multiple risk" in NSAM refers to engaging in 2 or more of the following behaviors: *Regular Tobacco Use*— Smoked a cigarette daily in the past 12 months; *Regular Alcohol Use*— Had a drink weekly or daily in the past 12 months; *Regular Binge Drinking*— Had 5+ drinks within a couple of hours 4 or more times in the past 30 days; *Marijuana*— Used marijuana at least monthly; *Other Illicit Drug Use*— Used cocaine/crack or injected drugs at least monthly; *Fighting*— Was in a physical fight in the past 12 months; *Weapon Carrying*— Carried a gun, knife, or other weapon in the past 30 days; *Unprotected Intercourse*— Used no effective contraceptive method in last sex in past 12 months.

[17] Positive behaviors in the NSAM include: *Good Grades* (among in-school respondents) — Grades were well above average or somewhat above average; *Always Employed* (among out-of-school respondents) — Always had a full- or part-time job since leaving school; *Sports*— Spent 10+ hours playing sports per week; *Clubs*— Spent 1+ hours a week in school clubs or other school activities; *Religious Involvement*— Believe religion is very important or somewhat important.

Table 7

Participation in Number of Positive Behaviors among In-School and Out-of-School Males Ages 15-19, by Number of Health Risk Behaviors

# of Risk Behaviors*	# of Positive Behaviors**			
	0	1	2-4	Total
Total (%)	5	25	70	100
0-1 (55%)	4	18	79	100
2-8 (45%)	6	35	59	100
In-School (%)	4	22	74	100
0-1 (60%)	4	17	79	100
2-8 (40%)	5	29	66	100
Out-of-School (%)	8	38	54	100
0-1 (36%)	8	28	64	100
2-8 (64%)	8	44	47	100

*Risk Behaviors include regular tobacco use, regular alcohol use, regular binge drinking, marijuana use, other illicit drug use, fighting, weapon carrying, and unprotected intercourse.

**Positive Behaviors include good grades/always employed, school sports, clubs, and religious involvement.

Source: Authors' tabulations from the 1995 National Survey of Adolescent Males.

Conclusion

This analysis examines the participation in 10 health risk behaviors by students in grades 7 through 12. Nearly half of students do not engage in any of the 10 risk behaviors. One out of four students engage in multiple risk behaviors. Multiple risk-taking increases with age, so that one out of three students in grades 11 and 12 engage in two or more health risk behaviors.

Although multiple risk-taking involves the minority of students, its importance to overall risk-taking among adolescents is great. Multiple-risk students are responsible for most risk-taking. For each specific risk behavior, the majority of students involved in it also engage in other risk behaviors as well.

Risk-taking among adolescents does not preclude participation in positive behaviors. Most teens, even those engaging in multiple risk behaviors, also engage in positive behaviors. Positive behaviors connect students to a range of adults — parents, ministers, priests or rabbis, coaches, or club advisors — and social institutions. Such connections provide potential points of contact for providing health education to teens.[18] Moreover, the emotional quality of these connections may influence teens' well-being and protect them from risk-taking and its negative consequences.[19]

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[18] For examples of interventions connecting to teens in these settings, see Sonenstein, F.L., Stewart, K., Lindberg, L.D., et al. 1997. *Involving Males in Preventing Teen Pregnancy.* Washington, D.C.: The Urban Institute. 118—122.

[19] Resnick, M.D., Bearman, P.S., Blum, R.W., et al. 1997. "Protecting Adolescents from Harm: Findings from the National Longitudinal Study of Adolescent Health." *Journal of the American Medical Association* 278(10):823—832.

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